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MONEY, EMPLOYMENT & FLUCTUATIONS

FULL VIEW AT A GLANCE

by

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PREFACE

The appearance of a new book on a subject on which there is already a surfeit of literature calls for a rational and convincing explanation. There need however, be no apology in the least for presenting to the student community this volume which is an attempt to discuss the problems of Money Employment and Fluctuations from an entirely new angle, the aim being to see the problems from the stand point of economic growth rather than economic stability. Here to fore tradition is obsessed with the problems of stability. It is only during recent years in the wake of the problems, following the close of the Second World War that a new angle has come into existence. There is still plenty of scope for re-examining all the old problems with a fresh vision.

The role of money, the quantity equations the importance of banking and the rate of interest and other allied phenomena of significance would stand in a unique light when looked at from the angle of economic development of the backward economies. The over populated and under developed countries suffer seriously from a good deal of unemployment open as well as disguised and a correct understanding of the implications of idle man power from the angle of growth could be of immense theoretical interest and practical import. A heavy programme of industrialisation under the general framework of a free society is quite likely to introduce in the economy the violent fits and starts of industrial fluctuations. It would be imperative to examine, this question *de novo* from the angle of the recently developing backward economies.

The primary object has all along been to assist the students to face the examination with bold fearlessness. If the logic be sharp and cutting, the language lucid and sweet and the angle of treatment fresh and buoyant, learning becomes a rare pleasure. The students can conveniently combine profit and pleasure in reading the present volume on money, employment and fluctuations.

total sum of currency or through an increase in the velocity of circulation of money or through the expansion of bank credit tends to push up the prices, given a certain supply of goods and services. A rise in prices creates in the minds of the entrepreneurial classes hopes of reaping a rich reward of profits. The entire economy gets ahead booming with increasing employment, income and output. The acquisition and a cumulation of money during the early stages of a boom seems to intoxicate the entrepreneurial classes into intense activity which leads to such a great over supply of commodities that there is a glut of unsold stocks in the market. The result turns out to be a "crash". The prices fall, profits dwindle, workers are disbanded, unemployment increases, incomes fall, demand slackens, prices are pulled down still further with mounting miseries to every section of the society. All this happens because of falling prices which is nothing but a monetary phenomenon.

The Keynesian analysis of the instability of the capitalistic order assigns a big weightage to the role of money and prescribes, therefore, appropriate monetary and fiscal measures to counteract the ups and downs of business. The open market operations of the Central Bank (the sale and purchase of securities), the bank rate policy, the reserve ratio policy, the taxation policy of the State, the scheme of public works etc. are all to be so designed as to create suitable monetary conditions for the stability and progress of the economy. The measures suggested by Keynes do not propose to deal any blow to the democratic framework of the society. It only implies a certain amount of State intervention with a view to inject or withdraw money in accordance with the needs of the economy and adopt appropriate contra cyclical measures.

In a socialist economy, money is assigned merely the role of a servant and not that of a master. In fact, the U.S.S.R. experimented for a brief period of time with a money less economy but the need for the proper functions of money—a medium, a measure a standard and a store, was so great that they had to restore the use of money. All the same, money in a socialist economy is not at all allowed to act as a guide to production. The production programme of socialist economy is governed by the predilections and judgement of the Central Planning Board and money has nothing to do with drawing up a plan. Planning is primarily physical in character in the sense that an actual survey of resources is conducted and on the basis of the availability of the factors of production and needs of the economy as seen by the planners an allocation of resources is made to various sectors of the economy. Things in a socialist economy are not left to the erratic fluctuations of the monetary demand that play such a great havoc in a socialist economy. With the abolition of private business distribution in a socialist economy does not depend on a scramble for exploitation. Money, of course, is used as a medium of distribution but the pattern of distribution does not affect the size and composition of

production with the same intensity as it happens in a capitalist economy. Superfluities and wastages from the social angle are reduced to the minimum. Fluctuations do not occur on account of the role of money. In other words in a socialist economy, money is completely under the control of the State and money does not exercise any control of its own in a socialist economy. In a capitalist economy money is the master and in a socialist economy money is the servant.

POINTS TO REMEMBER

- 1 *The classical theorists never faced the real problems of a capitalist society squarely. They assumed away the existence of the problem itself.*
- 2 *On the basis of Say's Law, it was presumed that full employment is normal excepting for brief lapses due to frictional causes.*
- 3 *Every capitalist economic activity clusters around the pivot of money.*
- 4 *The Keynesian analysis of the role of money in capitalist society differs sharply from that of the classicists.*
- 5 *Money, the servant, plays the role of money, the master, under capitalism.*
- 6 *Money in a socialist economy does not play the same decisive role.*

SELECT READINGS

1	Keynes	<i>General Theory</i>
2	Halm	<i>Money</i>
3	Crowther	<i>Outlines of Money</i>
4	G D H Cole	<i>Money, its present and future</i>

Q. 2. 'Money itself creates nothing, it is a means to an end it is a lubricant of ' Discuss (Agra 1958)

'Money is quite indispensable for the functioning of market economy' Discuss (Allahabad 1957)

"The importance of money essentially flows from its being a link between the present and the future" (Keynes) Comment (Punjab 1960)

Ans. After centuries of gradual evolution, there emerges an economic system based on exchange in terms of money with the slow decay and disappearance of barter which in the course of the

flow of history brought into existence crude forms of money. It was primarily because of the difficulties inherent in the system of barter that there arises the need for a smooth medium of exchange and unit of account so that commercial transactions could be carried on without the obstructions felt under barter. The appearance of money as a medium of exchange and store of value revolutionises the world of commerce and paves the way for the large scale capitalistic mode of production with the help of scientific inventions. The invention of money to play the role of medium of exchange and store of value, and to provide a convenient unit of account is in point of fact nothing short of a revolution. Under the new system of production, distribution and exchange, all economic units work on the basis of money profits, money-costs and money-prices.

Demand pattern reflects itself in production pattern, which in turn determines the structure of demand pattern for factors of production which in turn influences the demand for finished commodities. Thus money on the one hand provides us with a price mechanism which is an essential regulator of all economic activities in the absence of central planning, and on the other it helps in smoother working of the economy by removing obstructions of barter.

If money confined itself to the function of medium of exchange only people could not have wished for better. But in reality, being a medium of exchange implies the possession of value¹ and when value is to be stored, it may as well, or rather preferably, be stored in the form of an asset which is the medium of exchange rather in the form of one which is not. Older writers were in the habit of viewing money as a medium of exchange or at least considering store value function of money as of sufficiently little significance. Money had its own value which was determined by demand and supply and we find two main versions of the quantity theory of money emphasizing either one or the other of the two. The Cambridge version of the quantity theory emphasized the demand side of money and though gradually the fact that money was not so simple and obedient a servant dawned upon the intellect uals the fact was recognized rather slowly. As Prof. Pigou puts it, the economists were in the habit of considering money as "a veil behind which the action of real economic forces is concealed." Accordingly, we find text books on economic theory dealing with real economic analysis and considering some special problems of money only at the end or not at all.

1. A person would not accept anything in exchange unless he was sure that in turn he would be able to exchange it for something which is of value to him. Technically, therefore, he is storing value for a stipulated period and this period may be prolonged or shortened by him.

They failed to recognize that one of the main forces providing dynamism to the economy is found in the existence of money itself. It is money which provides a link between the present and the future by acting as a store of value.

But alas! this store of value is not a dependable thing. There is an element of risk that this store may get depleted or replenished unpredictably and at unwanted times. Transaction type approach to quantity theory was ignoring the possibility of our store of value differing from our calculations before we turn it over to somebody else. But the problem is there and has to be faced.

To straighten out the tangle we consider a simple situation in which people are using money both for transaction purposes as well as for storing wealth. In the market the value of money is to be determined by the current supply of goods and services *vis a vis* the current flow of money. Therefore if today people decide to save more in terms of money, the value of money rises in terms of other commodities and if they decide to save less or if they bring into market money saved in the past its value is bound to fall. Now precisely here the difficulty arises. All calculations have to be made in terms of money yields and money costs. Money is thus acting as a link or bridge between the present and future. But this link is quite a weak link entailing all sorts of grave dangers. No one can predict with certainty whether at a certain time in the future supply of money will be relatively more or less as compared with the supply of goods and services. But everyone has to make a guess as best he can and act accordingly. Expectations have to be there and activities are based upon them. Keynes has been emphasizing the role of expectations in his writings. Marginal efficiency of capital which is a major force in the determination of investment and hence income of the community is nothing but expected yield on investments. Further there are technical reasons because of which there is a time lag between plans of investment, actual investment, and its fructification. Investments have to be made on the basis of future expected yields and contracts have to be entered into with various factors of production regarding the payments for their services in money terms. But there is no contract or guarantee regarding the price which the finally produced commodity will fetch and therefore however bright the future may look it is always uncertain and this uncertainty increases with the length of the gestation period of investment.

Clearly as price expectations (the inverse of which is expectations of value of money) guide the economic activities whenever they prove false a disaster is spelled, which in turn may induce the investors to have very low faith in future and curtail their investment plans. In an unplanned and uncontrolled economy where money rules through the formation of prices such events are quite commonly experienced in the form of ups and downs of trade cycles. Keynes was right in saying 'Unemployment the precarious

life of the worker, the disappointment of expectation, the sudden loss of savings the excessive windfalls to individuals, the speculator, the profiteer—all proceed, in large measure, from the instability of the standard of value ¹

This instability of the value of money, or prices, is the main reason of our waste of economic resources. There are periods of inactivity and periods of overworking of our capital and labour resources. Against possible future demand, there may be over capitalization in businesses and if there is not, then you are not able to meet abnormally high demand which is likely to be there time and on. Against the risk of losing customers when demand is there, you run the risk of investing for a period when demand will not be there. "It is often supposed that the costs of production are three fold, corresponding to the rewards of labour, enterprise, and accumulation. But there is a fourth cost, the risk, and the reward of risk bearing is one of the heaviest, and perhaps the most avoidable burden on production. This element of risk is aggravated by the instability of the standard of value ²

It is not only these economic disadvantages in the form of trade cycles, loss of production and unnecessary payment of rentier incomes to profiteers and speculators which flow from the changing value of money but grave social dangers also. Money may be used to bring about greater social justice and well being through taxation budgeting for social welfare and adopting fiscal and monetary measures for economic development. In U S S R we have the extreme example of wiping out the moneyed class through depreciation of the roubles after the Bolshevik Revolution. But in a free market economy social injustice flowing both from rising and falling prices is too well known to be narrated in any detail. Evils of inflation and deflation as reflected in the relative distribution of wealth and income need no recounting. But even from the pure economic point of view fluctuations in the value of money are equally dangerous. For the moment it is enough to note that the redistribution of real wealth effected by changes in the value of money has a secondary effect on the total of real wealth produced, by reason of its influence on the decisions of business men ³. Not that we shall get rid of all evils by simply eliminating money. Use of money has to be there in one form or other in every society which can claim any economic advancement and so long as there are some assets which have liquidity and which have value, there will always be the existence of money (even if it is in a crude form). "At all times, in any society money will be needed for any complex economic society ⁴. And to the extent this money exists, there

1 *Keynes Tract on Monetary Reform*, p v

2 *Keynes Tract* pp v v.

3 Honor Croome—*Introduction to Money* p 44

4 *Ibid*—p 93

will be expectations, uncertainty and attendant dangers. We can only have rigid controls by which the evil effects of money may be minimized but so long as it is given freedom, it will always be dangerous. We must use money to lubricate the wheels of our economy, but at the same time we must be prepared to accept the accidents which are bound to take place.

POINTS TO REMEMBER

- 1 *Money is to be considered in terms of its two essential features the medium of exchange function helps in the smooth working of the economy the store of value function often obstructs this smooth working*
- 2 *Through the store of value function money acts upon the expectations of economic units. It acts as a link between the present and the future*
- 3 *Money as a store of value is dangerous because prices may change unexpectedly. An economy can have trade cycles essentially only if it has money acting as a store of value*
- 4 *Money spells this disaster (and social injustice also) because all economic calculations are made in money terms there are contracts and gestation periods of investment and hence there arises the possibility of profiteering and speculation*
- 5 *Changes in the value of money have their social evils also*
- 6 *We cannot eliminate the use of money. We can only reduce its evils by curtailing its certain functions and by adopting a central regulation of the economy*

SFLFCT PFDINGS

- 1 *Keynes—Tract on Monetary Reform*
- 2 *Honor Croome—Introduction to Money*
- 3 *Pigou—Fall of Money*
- 4 *Paul E. Krugman—Inflation*
- 5 *Keynes—General Theory Ch. XVIII*

Q 3. What is the social significance of money? Do you advocate redistribution of incomes in a community? If so suggest methods. (Agra 1957)

What is the social significance of money? Is money all powerful in a capitalist economy? Explain clearly. (Agra 1960)

Ans The social significance of money in a capitalist society originates from the decisive influence which money exercises on

the volume of production, and the pattern of distribution both of which hold a profound significance in promoting the cause of human welfare. In a society in which production is organised primarily for exchange in terms of money, there is an imperative need for a suitable medium of exchange in order to overcome the difficulties of barter. The value of every commodity to be exchanged is measured in terms of the standard value represented by the unit of accounting as embodied in the legal currency of the country. It not only facilitates exchanges by providing a suitable medium, but also enables certain individuals to amass enormous fortunes just by piling up currency notes instead of maintaining big godowns filled with rich conglomeration of a diversity of commodities which would have been the case had there been no money at all. Apart from the traditional four fold functions of money—a medium, a measure a standard and a store, each of which has a social significance of its own the most important function of money from the social angle emerges from the influence and role of money in the determination of the total volume of output and the pattern of distribution of the capitalistic order of society.

In a completely monetised exchange economy the division of the net national product among the members of the community takes place on the basis of the apportionment of purchasing power. Those that receive a larger quantity of purchasing power can command a greater share of the national income than what could be claimed by persons with a lesser amount of money. The rewards to the four factors of production that collaborate in the process of creation of wealth and income are determined in the form of sums of money to be allocated to them for their respective services. Rent, interest, wages and profits are determined in terms of sums of money earned per unit of time. The only exception to this rule would be producers like farmers who consume a good proportion of their own produce. In general in any advanced economy, the division of the net national product among the members of the society must take place on the basis of the division of purchasing power. The social significance of money in a monetised economy obviously emerges from the fact that one's share in the national income depends on one's command over money.

In the competitive aquisitive type of societies one can easily appreciate the infinite struggle for the aquisition and accumulation of money in view of the enormously formidable power which money ~~rests in its master to command everything that is subject to exchange in terms of money~~ and there are really very few rare things indeed that are not subject to exchange for money. The mobility of the factors of production into various directions is normally conditioned by the prospects of higher earnings. The entire productive mechanism of a capitalist society is organised with the hope of reaping a rich monetary reward, the pursuit of

money becomes almost the be all and end all of all economic activities Money the servant becomes money the master Money is actively divested of its neutral role and in fact the progress and prosperity of a capitalist society hinges largely on the role played by money

The size and composition of the net national product is largely determined by the pattern of distribution of the monetary income Production in a capitalist society is organised for profits in anticipation of a future demand The aggregate demand of the entire community as well as the demand of particular sections for particular products would be governed by the pattern of distribution of purchasing power In a society in which there are great inequalities in the distribution of purchasing power there are two significant probable consequences If the wealthy minority happens to be endowed with a great propensity to save, there is likely to be great deficiency in aggregate demand in case the propensity to save is not matched by a corresponding propensity to invest Should the rich happen however to be endowed with a strong propensity to consume the demand for comforts and luxuries is all likely to be disproportionately greater than the demand for necessities The vast majority cannot translate their barest of necessities into demand due to their inadequate command over purchasing power In the case of the former a deficiency of aggregate demand would lead to a fall in the total volume of production and the economy would be exposed to the chronic threat of a depression round the corner due to the unstable nature of the demand for goods and services depending on the whims and fancies of the rich The latter case in which the wealthy are endowed with a strong propensity to consume there would be a distortion of demand in the sense that the resources of the society would be directed to the production of the superfluities of the rich at the cost of the bare necessities of the poor

In order to stimulate a rise in aggregate demand and rectify the distortion of demand too heavily tilted in favour of comforts and luxuries at the cost of necessities it is imperative to reduce the inequalities in the distribution of wealth and incomes A reduction of inequalities is likely to be productive of a much greater economic and social welfare than what we have in a community in which a small minority wallows in wealth and the vast majority lives eternally on the verge of destitution There is a strong case for reduction of inequalities Economic oligarchy is hardly compatible with political democracy In spite of the theoretical objections to the inter personal comparison of utility and the law of diminishing marginal utility as applied to income it is contended by Pigou that there is a strong and convincing case for the reduction of inequalities

Inequalities arise mainly out of two sources (a) differences in the inborn and acquired abilities of individuals and (b) differences

in the ownership of property. The latter is far more important than the former.

Differences in ability could be considerably reduced by the dissemination of facilities for education. The denial of opportunities for training renders the children born in poor families in a state of disability. Those who are born in well to do families start off with all the advantages of a good material heritage. Secondly, differences arising out of property could be reduced to a significant extent by a progressive scheme of taxation, subsidies and grants. A gradual reduction in inequalities could be thought of by adopting a scheme like the one advocated by the Italian economist Rignano. The adoption of the welfare ideal by the State also goes a long way in reducing inequalities. The communists would advocate a complete abolition of private property in order to reduce inequalities. They would like to practise a principle like 'from each according to his ability and to each according to his needs.'

POINTS TO REMEMBER

1 *The social significance of money in a capitalist society originates from the influence of money on production and distribution of wealth and income.*

2 *In a completely monetised economy the division of the net national product among the members of the community takes place on the basis of the division of the monetary income.*

3 *In a capitalist economy, the pursuit of money is the major occupation of the majority of the people.*

4 *There is a regular relationship between the pattern of distribution of money and the size and composition of production.*

5 *Great inequalities bring about a general deficiency as well as a distortion of demand.*

6 *We can reduce inequalities within the democratic frame work by the adoption of suitable fiscal and monetary measures.*

SELECT READINGS

- 1 Meade *Economic Analysis & Policy*
- 2 Bye and Hewett *Applied Economics*
- 3 Dalton *Public Finance*.

Q 4. Critically examine the 'Quantity Theory of Money.'
(Rajasthan 1959)

Examine critically the quantity theory of money. What recent advances have been made in the theory dealing with determination of the value of money?
(Agra 1957)

✓ "The quantity equations remain the most illuminating summary of the forces determining the general level of prices." Examine critically the above statement. (Agra 1959)

Give a critical appraisal of the quantity theory of money in the light of modern economic theory (Allahabad 1960)

"The more we think in terms of logical dependence rather than mere chronological sequence, the less reason we shall find to quarrel with the quantity theory of money as embodied in the well known equations." Discuss

"The 'quantity equations' themselves are nothing more or less than shorthand expressions designed to indicate the nature of the variables whose operations can be shown to influence prices" (Karnata 1960) Discuss.

Examine the arguments by which Keynes attempts to prove that this Quantity Theory is not necessarily valid even in conditions of full employment (Calcutta 1957)

"The quantity theory is over-simplified. But in times of inflation it comes into its own; and in those times it is so important that we should preach the Quantity Theory in season and out of season" (Samuelson) Discuss (Poona 1960)

Ans Fisher's Quantity Theory of Money or the Equation of Exchange states that there is a direct and proportional relationship between the quantity of money and the price level so that when the quantity of money in circulation increases, the price level rises (or value of money falls) in exactly the same proportion and vice versa

The Quantity Theory of Money although associated with the name of the American economist Prof Irving Fisher, its origin can be traced back to Bodin, Cantillon and Hume who gave rough formulations of the idea embodied in the theory J S Mill, however, gave a clear statement of the quantity theory of money. He opined, "The value of money, other things being the same, varies inversely as its quantity, every increase of quantity lowers the value and every diminution raising it in a ratio exactly equivalent"¹. In the same way, Taussig stated, "Double the quantity of money and other things being equal, prices will be twice as high as before, and the value of money one half. Halve the quantity of money and other things being equal, prices will be one half of what they were before and the value of money double"²

Fisher enunciated the Quantity Theory of Money in his book *Purchasing Power of Money* published in 1911. The credit of Fisher lies in that he represented this theory in terms of an

1 J S Mill, *Political Economy*, Vol II, p 15

2 Taussig, *Principles of Economics*, Vol I, p 2.0

algebraic equation called the *equation of exchange* and clearly brought out the assumptions underlying the theory. He stated that

$$MV = PT$$

i.e., Supply of Money = Demand for Money

$$\text{or } P = \frac{MV}{T}$$

where

M represents the quantity of money in circulation including both coins and bank notes but excluding bank reserves and the money held by the Treasury

V refers to the velocity of money in circulation and is obtained by dividing the aggregate volume of money payments in a given period by the units of money in circulation. The velocity of circulation of money shows the average number of times a unit of money changes hands

The product of M and V gives us the aggregate effective supply of money during the given period. If a rupee note performs on the average 5 transactions and the total number of notes in circulation is 1000 crores then the total value of transactions which can be done with these notes is $Rs. 1000 \times 5$ crores = $Rs. 5000$ crores. This is the supply of money during the given period of time

P represents the general price level. T represents the total volume of transactions for which money payments are made, it includes goods, services and securities and is equivalent to the physical volume of trade

The product of P and T gives us the demand for money. The supply of money must at any time be equal to the demand for money. In other words MV must be equal to PT . A doubling of M, V and T remaining constant must bring about a doubling of P

But in the modern economic system money consists not only of the bank notes and coins but bank deposits also perform the function of money. Fisher has therefore extended the equation of exchange to include the bank deposits also. If M represents the amount of bank deposits and V, the velocity of circulation of the bank deposits, then the equation of exchange takes the form

$$MV + M'V' = PT$$

$$\text{or } P = \frac{MV + M'V'}{T}$$

The fundamental thesis which Fisher seeks to establish in the equation of exchange is that the price level or the value of money

is a function of the quantity of money only. Let us suppose that M or the quantity of money is doubled, what is the influence of this upon other magnitudes of the equation?

The normal effect of a doubling of M is to double M' (bank deposits, as "under any given conditions of industry and civilisation, deposits tend to hold a fixed ratio to money in circulation" and thus "the inclusion of M' does not normally disturb the quantitative relation between money and prices")

The change in M , Fisher contends, has normally no effect on the velocity of circulation V is the average rate of turnover and depends not upon M but upon the "monetary habits" of the individuals. Each man's adjustment of money is, of course, somewhat rough and dependent largely upon the accident of the moment i.e., there is no definite relationship between expenditure and the actual quantity of money. But in the long run and for a large number of people Fisher assumes V to be given and constant. The factor V will depend upon density of population, commercial customs, transport and other technical factors and not on the quantity of money."

Similarly Fisher contends that a change in the quantity of money does not affect the volume of trade, T . As he has put it, "The stream of business depends upon natural resources and technical conditions, not on the quantity of money."

Thus all the elements V , V' and T having been shorn of their fluctuating tendencies, Fisher succeeds in establishing a direct nexus between the price level P and the quantity of money in circulation, M of such a nature that the purchasing power of money becomes a direct inverse function of its quantity. As he has put it, "One of the normal effects of an increase in the quantity of money is an exactly proportional increase in the general level of prices. We find nothing to interfere with the truth of the quantity theory that variations in money (M) produce normally proportional changes in prices."¹

Keynes in his book *Treatise on Money* poses a crucial question namely, what is the fundamental task of the monetary theory? Keynes observes that the fundamental task of monetary theory is not merely to establish identities or statical equations relating the turnover of monetary instruments to the turnover of goods traded for money. The real task of such a theory is "to treat the problem dynamically", analysing the different elements involved in such a manner as to exhibit the causal process by which the price level is determined, and the method of transition from one position of equilibrium to another. From this point of view, the

¹ Fisher, *op. cit.*, p 183.

Fisher quantity theory of money is of little analytical and practical significance. Fisher's equation of exchange is a purely static identity. It merely states what is obviously true namely that the turnover of money is always equal to the turnover of goods traded. That is why Keynes has observed "The Quantity Theory of Money is a truism which holds though without significance. It does not give any precise clue to the causal process by which the value of money is determined. It merely states that V and T remaining constant, an increase in M leads to an exactly proportionate increase in the price level. It does not show how an increase (or decrease) in the quantity of money reacts upon the price level. This aspect of the problem has been clearly explained by Keynes in his *General Theory*. According to Keynes a change in the quantity of money affects the price level through the three independent variables of Keynesian system namely liquidity preference, propensity to consume and investment. The immediate effect of an increase in the quantity of money is to lower the rate of interest by increasing the supply of money available for speculative motive. A fall in the rate of interest brings about an increase in the level of investment. An increase in investment through the consumption multiplier leads to an increase in income. So long as there are enough of unemployed labour and capital resources an increase in the quantity of money would in this way lead to an increase in real income or output rather than price. But in the long run as the state of full employment tends to be reached price level rises. After full employment an increase in the quantity of money spends itself entirely in raising the price level and every increase in the quantity of money is associated with an exactly proportionate increase in the price level and vice versa. Thus Fisher's quantity theory of money holds good only in a state of full employment. This assumption of full employment is implicit in the Fisherine quantity theory of money.

Fisher assumes the magnitudes V , P and T to be given and constant. This may be true in the long run but in the short run both these factors are subject to fluctuations. There are cases in monetary history where the price level has risen not because of an expansion in the quantity of money but due to a rise in the velocity of circulation of money. The immediate cause of hyper inflation in 1920's in Germany was not so much the increase in M but the increase in V , everybody spending the fast depreciating mark as quickly as possible. Similarly the effect of an increase in M may be partly or fully neutralised by a fall in V and this is what happened in Germany in the 1920's. In the same way M may increase without there being any rise in P for the reason that T may have increased. The fact is that V and T do not remain constant nor is T independent of P and other variables as assumed by Fisher. The factors are interdependent and mutually determine each other.

A logical implication of Fisher's quantity theory of money is

that the price level can be controlled fully by monetary policy. The truth of this generalisation was put to an acid test in America during the Great Depression of the 1930's. The Federal Reserve system of America with a view to arrest the downward movement of the price level carried on the process of expansion of money supply to fantastic extremes but without any substantial effect on the price level. This only shows that there were non monetary factors operating on the price level which were outside the control of the monetary authority. What in fact happened is that when the price level was falling or the value of money was rising, the people accumulated cash balances and this reduced the velocity of circulation of money which nearly neutralised the increase in the quantity of money in circulation.

POINTS TO REMEMBER

1 *The sum and substance of Fisher's Quantity Theory of Money is that the price level is a function of the quantity of money in circulation only and an increase in the quantity of money leads to an exactly proportionate rise in the price level and vice versa*

2 *Fisher has expressed his theory in terms of an algebraic equation namely, $MV=PT$. The magnitudes P and T remaining constant M and P vary directly and in the same proportion*

3 *The Quantity Theory has been a target of severe criticism especially by Keynes*

4 *The theory is a truism which holds good without significance. It does not show the causal process by which a change in the quantity of money brings about a change in the price level*

5 *The theory holds good only in a state of full employment*

6 *The factors M , V and T are assumed by Fisher to be independent but in fact they are mutually dependent and are also subject to fluctuations*

7. *The theory is incapable of explaining the price movements associated with the trade cycles*

SELECT READINGS

- 1 Irving Fisher *The Purchasing Power of Money*, ch. 5
- 2 Robertson D H, *Money* ch. 2
- 3 Keynes, J M, *A Treatise on Money*, Vol. I, ch. 10
- 4 Crowther Geoffrey, *An Outline of Money*, ch. 3

Q 5 Would you consider the cash balances approach to the value of money as superior to the transaction theory?
(Venkatesuara 1960)

Examine critically the 'Quantity Theory of Money'. How far can the explanation given by Keynes about the determination of the value of money be considered satisfactory? Discuss
(Agra 1960)

Discuss critically the Quantity Theory of Money in the light of Keynes' General Theory.
(Allahabad 1958)

State the Cambridge Equations and show their significance in monetary theory
(Allahabad 1957)

What is the salient difference between the Fisherian Equation and the Cambridge Equation of Money? Which one do you prefer and why?
(Allahabad 1958)

Ans The Fisherine Quantity Theory of Money represents what is called the *Cash Transaction* theory of money. A second variety of the Quantity Theory has been evolved by the Cambridge economists like Marshall, Pigou, Keynes and Robertson. This theory is known as the *Cash Balances* approach.

The essence of the cash balances approach has been clearly stated by Marshall thus

"In every state of society there is some fraction of their income which people find it worthwhile to keep in the form of currency."

"A large command of resources in the form of currency renders their business easy and smooth and puts them at an advantage in bargaining, but on the other hand it locks up in a barren form resources that might yield an income if invested."

"Every man finds the appropriate fraction after balancing one against another, the advantages of a further ready command and the disadvantages of putting more of his resources into a form in which they yield him no income or other benefit."

"Let us suppose that the inhabitants of a country find it just worth their while to keep by them on the average ready purchasing power to the extent of a tenth part of their annual income together with a fifteenth part of their property, then the aggregate value of the currency of the country will tend to be equal to the sum of these amounts."¹

In algebraic terms, suppose that the community desires to

1. Marshall, *Money, Credit and Commerce*, I, (iv), 3

hold command over K units of goods. If P is the price unit, then PK represents the demand for money. But the demand for money must be equal to its supply. Therefore $PK = M$ where M is the quantity of money. This is the fundamental Cambridge equation. There are two versions of the Cambridge equation namely, the Pigou equation and the Keynes equation.

Prof Pigou expressed the idea contained in Marshall's statement of theory in the following way

$$P = \frac{KR}{M}, \text{ where}$$

R represents the total real income expressed in terms of any particular commodity, wheat enjoyed by the community over a period of time. K represents the proportion of the real income held by the people in the form of the legal tender. M stands for the number of units of legal tender.

P represents the purchasing power of money.

But money is held not merely in terms of legal tender but also in bank deposits. The equation has therefore been enlarged to

$$P = \frac{KI}{M} \left\{ C + h(1-C) \right\}$$

where C is the proportion of cash which people keep in legal tender and h is the proportion of legal tender to deposits held by the banks.

Keynes has rejected the Pigou equation as "inadequate". First, Keynes contends that the introduction of the factor R , the current real income of the community suggests that variation in it is one of the two or three most important direct influences on the demand for resources. This according to Keynes is correct in the case of income deposits only. But the significance of R is much reduced when attention is focussed on total deposits and not on the income-deposits alone. Secondly, the prominence assigned to the factor K —the proportion of bank deposits to the income of the community in the equation is misleading when extended beyond the income deposits. Thirdly, by measuring the quantity of money held in terms of wheat Pigou evades the main problem. The object of any theory of money is not to discover the price of wheat but the purchasing power of money.

Keynes by rejecting the Pigou equation advanced a new equation of exchange in his *Treatise on Monetary Reform*. The equation is

$$n = p \{h + rk\}, \text{ where}$$

n represents the quantity of money in circulation

p is the price of a consumption unit, a representative unit of

the goods and services which enter into the budget of a typical consumer. l represents the amount or number of consumption units the community chooses to keep in the form of cash. l' represents the number of consumption units the community holds in the form of bank deposits, r is the cash reserve ratio.

In the simplified form, excluding the bank deposits, the equation can be written as

$$n = pK$$

Now we can compare and contrast the three quantity equations of Fisher, Pigou and Keynes. Let us abstract from the operation of the banks as that would make the comparison complicated. Let us also convert Pigou's P , the value of money into the price level p . Then $P=1/p$ and the three equations can be written as

$$\begin{array}{lll} P = M/V & p = M/KR & p = n/K \\ \text{Fisher} & \text{Pigou} & \text{Keynes} \end{array}$$

In all the three equations the price level is a direct proportional function of the quantity of money. Of course, Fisher makes use of the concept of velocity of circulation of money which Marshall has characterised as not a wrong but a long way of describing the relationship. This, however, does not mean that Fisher considers certain factors which the Cambridge economists ignore. While the former emphasizes the medium of exchange function of money, the latter stresses the store of value function. To Fisher money is demanded only for the purpose of carrying out transactions. To the Cambridge economists demand for money means demand for money to hold. Fisher's V is the reciprocal of Keynes' K . In a period of boom people expect prices to rise and they are therefore in a hurry to spend the money and acquire goods. Fisher would describe the situation by saying that V is high. The Cambridge economists would describe the same by saying that the demand for money K is low.

Although the Keynesian equation is identical with the Fisher equation, the former is an improvement over the latter in many respects. In the first place, Fisher concentrates upon the cash transaction or the general price level which is of no particular significance to the determination of the purchasing power of money. Unlike the Fisher equation, the Keynes equation does not refer to the "hotch potch" price level but the price level of the consumption units. It throws light on what Keynes calls the consumption standard or the cost of living standard value of money. Secondly, the Fisher equation is completely worthless in the explanation of the phenomenon of trade cycles. According to Keynes, business cycles occur as a result of the erratic fluctuations in K and K' . This can be neutralised by the central bank by operating on n and r . The factor K' can be regulated by bank rate. Thus the Keynesian

equation gives a clear clue to the field where the monetary authority can operate in order to avoid price fluctuations. Thirdly, the Fisher equation seems to suggest that even idle cash balances exert an influence upon the price level but in fact they do not create any demand for goods and services and therefore they do not affect their prices. This fact is clearly taken into account in the Keynesian equation.

But the Keynesian equation is not free from defects. In fact Keynes himself has not been forgetful of these defects which he points out in his *Treatise on Money*. First, the equation is defective because P measures only the price level of consumption units. The equation seems to suggest that people hold money to buy consumption units only. But in fact people hold money for a multiplicity of purposes and with multiplicity of motives. Keynes himself suggested in his *General Theory* that demand for money depends upon (a) transaction motive (b) precautionary motive and (c) speculative motive.

In his *Tract on Monetary Reform*, Keynes assumed the constant levels of output and employment. When n is changed, volume of output remaining constant, the net effect would be a proportionate change in the price level. This may be true in the long period but in the short period the levels of output and employment are subject to change. For this very reason as trade cycle is a short period phenomenon, the fluctuations of prices associated with trade cycles cannot be adequately explained with the help of the Keynesian equation.

The deficiencies of the *Tract* equation have been adequately met by Keynes in his *General Theory*. He has dovetailed the theory of money with the theory of output and has reached the conclusion that the quantity theory of money is valid only in a state of full employment. In the pre full employment state the changes in prices are due to changes in the levels of income rather than in the quantity of money.

POINTS TO REMEMBER

1. The Cambridge equations are a variety of the Quantity Theory of Money developed by the Cambridge economists. They have emphasized the store of value function of money as contrasted to the medium of exchange function by Fisher.

2. There are two versions of the Cambridge Quantity Theory, namely, the Keynesian equation and the Pigou equation.

3. Of the two versions, Keynesian equation and the Pigou equation, the former is superior to the latter.

4. The Keynesian equation is also superior to the Fisher equation.

5 The Keynes equation is also defective in that it takes into account only the price level of consumption units and is also based on the assumption of the given levels of income and employment

SPECT READINGS

- 1 Marshall Money Credit and Commerce 11
- 2 Keynes A Treatise on Money Vol I chapter 10
- 3 Robertson Money chapter II
- 4 Hahn G N Monetary Theory chapter 2

Q 6 (a) Explain the concept of income velocity of money and discuss the factors which govern it (Poona 1960)

(b) Explain the importance of the concept of the income velocity of money in the analysis of the relation between money supply and economic activity (Delhi 1958)

(c) It is the changes in demand and supply in the product and factor markets that are relevant to the explanation of price behaviour and not the changes in the quantity of money itself Discuss (Delhi 1956)

Ans. The concept of income velocity of money is the outcome of a natural sequence in the process of growth of the Keynesian school of thought. Money, that is traditionally supposed to be passive and neutral is seen to play a considerably active role in the process of growth of the net national product of a given economy. The quantity theory of money that held sway prior to the appearance of the *general theory of Keynes* concentrated its attention primarily on the problem of determination of the value of money, rather than on the functions of the money in shaping the course of the income flows that accrue to the various factors of production that collaborate in the creation of the income stream. The concept of income velocity especially, throws a new light on the functions of money, especially under the capitalistic system of society in which all economic activities cluster around the pivot of money. The concept of income velocity subscribes the ends of functional analysis in the monetary field }

Whether we take transactions version or cash balances version the meaning is approximately the same viz given other factors the price level changes in the same proportion as the quantity of money. Refinements of the theory are there—in the form of introducing velocity of circulation of money, in the distinction between legal tender money and bank money and even in the form of cash reserve ratios maintained by the banking system. But, the theory as it comes to us mainly speaks of one thing only, that the value of money, whatever we mean by it, is an inverse function of its supply

Now it will be granted that such a simple way of looking at the problem is quite deceptive. It is not that when we change M in the identity $MV=PT$, only P should respond to the change. There is every reason to believe that T should also change in magnitude. And thinking in terms of the Cambridge version we say that changes in money supply ought to show some effect on the income of the community. If, therefore, in response to changes in money supply, income also changes, a fuller version of the theory explaining the value of money must be broad based and include the changes in income also. ✓

The publication of the *General Theory* of Keynes paved the way for a right approach to the problem. He himself had neglected changes in money and effects on prices because his main purpose was to analyse the changes in real income and employment. But the principles put forth by him shed light on the working of the economic system and the way real income of the community changes in response to various stimuli. In this connection his theory of multiplier is specially instructive which describes how an injection of money income at one point of the economy generates a multifold real income in the economy provided there is not already full employment. The traditional quantity theory would have stated that even in the depth of a depression injecting the money supply would mean a proportionate rise in prices! ✓

Detailing therefore the income approach to the value of money by dovetailing the principles of *General Theory* to the principles of quantity theory we first of all make a distinction between the income velocity of money and circulation velocity of money. The quantity theory takes account of the circulation velocity of money which is the number of times a unit of money on the average changes hands in a given period of time. But this changing of hands may not be creating an equivalent money income in turn. Money income will be created only as and when the expenditure is received by final factors of production in the form of wages, rent, interest and profits. However, here also a unit of money can cause to become income more than once in any period of time and it is the average number of times a unit of money turns up in the form of somebody's income that is called the income velocity of money. Income velocity of money can be calculated by dividing the total money income earned in a period of time by all the economic units of a country divided by the average quantity of money supply. Thus on one side we do not take the traditional T as such we pick out only that portion of it which shows up as income of someone. And on the other we also ignore the traditional V . As Kent puts it, the income theorists 'concentrate their attention upon the receipts and disposal of the total money income of the people of the country—such income being all the money received as wages, interest, rent and other allocations.'

resulting from production activity.¹ He goes on to say that if total money of community happens to be \$200b while the average quantity of money available in circulation has been \$100b then the income velocity will be two. Clearly, the circulation velocity will be much greater than income velocity because all transactions do not create money incomes. A D Gayer, explaining the meaning of income velocity says that "we call the number of times money passes through the production sequence before again becoming income in any given period of time its income velocity (in contradistinction from its transaction velocity)".² "In boom years the latter (income velocity) appears to have been about 3 per annum in Great Britain and the United States. Obviously, during depression it is likely to be markedly less because, as shown above, new spendable funds are not wholly employed in making new purchases, or are utilised more slowly part being held idle at each stage in cash or deposits".³

Having understood the meaning of income velocity it follows that it would be more profitable if link between price level and money income were found in the place of a link between price level and all kinds of haphazard transactions. For this purpose the income theorists proceed on the basis that all money expenditure on final consumption goods and finally purchased capital goods equals the sum of all money incomes received in that period. It should not be difficult to establish the truth of this equation. All the expenditure incurred in the purchasing of final consumption goods and capital goods was naturally equal to incomes received by their producers and was divided into different factors of production in the form of profits (or losses), wages, rent, interest etc. The money which was received by the producers of raw materials from the final producers was similarly again divided up into the profits (or losses) of the producers of raw materials and the wages, rent, interest etc paid by them to the factors of production which they in turn had employed. Thus all through there is no danger of double counting. We are only counting income of a factor as which he received an agent or an individual as a contributor to the final exchange value of the commodity. Thus the income received by all the factors of production in the economy is equal to the exchange value fetched by the goods and services produced by the community.

The difference between traditional quantity theory and income theory here, therefore, is that while quantity theory would include all transactions at their full exchange value in the

1 Kent (Raymond P) — *Money and Banking* p 419

2 Gayer (A D) — *Monetary Policy and Economic Stabilisation* p 223

3 *Ibid* p 223

calculations of T, income theory takes account of the value added at various stages only

Now with this identity between total money incomes and total money expenditure on final consumption goods and capital goods, the income theorist would establish the value of money. The flow of money income has generated a flow of real goods and services and the value of money therefore depends upon the relative strength of the flow of money income and the flow of real goods and services. Greater the income velocity of money, greater will be the flow of money income generated by it and given the flow of real goods and services, higher will be the price level as lower will be the value of money. On the other hand, to the extent that this flow of money income has been able to generate additional flows of goods and services, price levels as determined at the final end of purchases and sales will be lower. It is not denied that the above portrayal is a simple picture of reality, that in fact incomes generated tend to have long drawn effects in terms of the supply and employment of factors of production, but then these things can easily be accounted for in a more realistic and less abstract picture. Further it has to be granted that a major defect of the above approach is the comparatively scanty treatment of time lags involved in the generation of money income and the response in terms of output. But this problem should not pose any special difficulty. All that we have to do is to choose a certain period, find out the flow of goods and services in that period and the expenditure which is being pitched against that flow through the flow of income. If money income generated today is able to call for production of goods only tomorrow, then to that extent today's price level will be higher and tomorrow's lower.

This last point presents interesting possibilities of useful application of the income approach in matters of planning. If we calculate the time lags involved in the response of investment to the income generated and the time lags involved in the fructification of investment, we can calculate the various effects of governmental efforts on demand and supply of various commodities and hence their price level. It is interesting to note that income-velocity concept in its greater detail enables us to split up the total income flows into various streamlets and sub channels meant for the demand of various goods and services. Considering each individual channel of supply of goods and services and the corresponding channel of money demand flowing from money income flow, it is possible to find out various individual price levels. By considering the behaviour of various demand channels, in connection with changes in aggregate income flows, it can be found out how changing incomes are going to influence the demand for various commodities. In India, for example, it has been found that with rising incomes the demand for coarse grains is comparatively decreasing while that of superior grains and white sugar is

increasing. Such an analysis can also be carried for future projections of demand and supply and necessary steps can be taken for the smooth and balanced working of the economy. For an under developed country like India this analysis presents a special scope for use in planning.

We conclude this part of the argument by emphasizing once again that it is the flow of money income and the flow of goods and services which is of real relevance to the determination of price level and not the changes in the quantity of money as such. For changes in the quantity of money may be counteracted or strengthened by the income velocity which in turn generates the demand and supply of consumption and capital goods. It is therefore necessary to see in brief what are the major forces which go to determine the income velocity and to what extent the supply of goods and services responds to it in any given situation.

Since income velocity is calculated as total money income received in a period—average supply of money in that period, obviously one major determining factor will be the speed with which people spend their incomes. This expenditure of course should not be of purely transactionary nature but should be able to generate money income of an equivalent magnitude. Such an expenditure therefore has to be on final consumption goods or capital goods or it has to be a payment to various factors of production for their services. In other words the expenditure should be in the nature of consumption or investment. Now both these expenditures are stimulated (and damped) by well known causes. For example, consumption expenditure will increase in anticipation of rising prices, shortages, upheavals or rising incomes while investment expenditure will be stimulated in anticipation of rising profits and demand. Following from the consumption and investment demands the demand for factors of production will be desired. Obviously when the demand in the commodity and factor markets is increasing automatically prices will tend to rise, the money supply will increase through creation of credit and in the absence of or in shortage of bank credit extra means of financing new demand will be found out. For example velocity of circulation of money will increase and people will try to develop techniques of consumer credit there will be building societies, more bills of exchange etc etc. As Radcliffe Committee points out in its Report, it is not the money supply as such which will limit the demand in any appreciable way, money market may be tight but people will find extra sources of finance and there are numerous ways in which the liquidity of other assets may be used to finance the enhanced demand.

In conclusion, we can say, therefore, that it is not the quantity of money as such or its velocity of circulation which is of real significance in the determination of price levels, of much more importance is the money income flow determined by the income

velocity of money and the flow of goods and services as determined in response to the money flow through various investment decisions and time lags involved in the fructification of those investments

POINTS TO REMEMBER

(1) The traditional quantity theory of money is especially defective when it ignores the effect of changing quantity of money and its velocity on economic activity

(2) The publication of the General Theory paved the way for a new—the income approach, to the problem. Now the problem of pricing can be tackled by gauging the flow of money income and the flow of goods and services in response to that flow

(3) Income velocity of money is calculated as total money income—average quantity of money in circulation in a given period. Income velocity of money is almost always greater than the circulation velocity of money

(4) The income theorists proceed on the assumption that expenditure on consumption and capital goods finally purchased is equal to the income received by all the community during that period. Thus as against traditional theory the income theory takes only the value added at various stages rather than counting all the transaction value of the traded commodities

(5) Given income velocity, the quantity of money and the flow of output, we can calculate the price level and changes in it. By splitting up the income flow into sub channels of demand and matching them against sub channels of output flow, individual price level can be calculated and projected into the future

(6) This calculation of sectoral price levels etc is specially useful in an underdeveloped country embarking upon planned economic development. It also shows clearly that for price levels the demand for factors and commodities and the flow of output are of real importance and not the quantity of money as such

SELECT READINGS

- (1) Kent (Raymond P) *Money and Banking*
- (2) Gaver (A. D)—*Monetary Policy and Economic Stabilization*—ch. X.
- (3) Chandler (L. V)—*Introduction to Monetary Theory*

Q 7 Trace the process through which inflation and deflation have their impact on production and distribution (Delhi 1960)

Ans Production and distribution in a capitalist society are guided and governed mainly by the movement of prices. The

motivation for production is the desire for making a fortune. The prospects for making a fortune would obviously hinge on the success of the entrepreneurial classes in purchasing the factors of production at the lowest of prices and selling the products at the highest of prices and appropriating the 'surplus' by way of profits—a reward for the assumption of risks and uncertainties of an unpredictable future market, in anticipation of which the entrepreneurs have to undertake investment. The behaviour of the entrepreneurs is motivated mainly by the desire for profits which in turn depends on the excess of the sale prices over and above the cost prices. Consequently the entrepreneur's expectations regarding the probable turn of prices would have a decisive effect on their desire to invest and produce—optimistic expectations leading to a spurt in investment, employment and production and pessimistic expectations leading to a shrinkage of investment, employment and production. Short term expectations particularly have almost a hysterical influence on the employment of investible funds as is evidenced by the diversion of a large proportion of the investible funds towards speculative ventures. Long term investments could not possibly be guided solely on the basis of the whims and fancies of the entrepreneurs as to the probable turn of prices. There is no reliable basis at all for making dependable projections about a distant future—not even the near future. Long term investments are undertaken by the entrepreneurs out of a complex of motives, the desire for profits being perhaps by far the most important. What matters for our purposes is the fact that production under capitalism depends on the volume of investment which is undertaken mainly on the basis of the prospects of making a fortune which depends eventually on the excess of the sale prices over the purchase prices.

Distribution, again, depends on the prices of the factors of production as determined by the specific demand for, and the supply of the factor in question. The apportionment of the national product as between the members of the community that collaborate in the process of production depends on the prices which they manage to command. It is relative scarcity as against demand which determines the prices of the factors of production. Every increase in scarcity makes for more and more of exchange value, whereas every decrease in scarcity makes for less and less of exchange value. The problem of distribution has been handled traditionally on the basis of the nature of rent, wages, interest and profits—the respective rewards of the four factors of production, land, labour, capital and organisation. Here again, we find that the pattern of distribution depends on the determination of the prices of the factors of production in one way or the other.

The impact of inflation and deflation on production and distribution has to be examined on the basis of the relationship that obtains as between (a) prices and production and (b) prices and distribution since prices constitute the prime mover in guiding the destiny of

Q. 8 What are, according to you, the main criteria of and the requisites for the monetary equilibrium? Examine the suitability of your criteria in the context of the prevailing Indian economic situation
(Poona 1960)

Ans It is an indisputable fact that money plays a decisively leading role in guiding the destiny of the capitalistic order of economies. The developments in the field of monetary theory ever since the appearance of the *General Theory* of Keynes in the year 1936 have brought to limelight the influence exercised by money in the determination of the total volume of employment and output. The presumed neutrality of money by the classical theorists was blown up by the incisive analysis of the Keynesian school of thought. The classicists believed that money actually is what should be only a servant at the command of the physical forces of the economy. This was not at all warranted by the facts of the situation. The relationship between monetary and general equilibrium is of great theoretical interest and practical significance especially so, for countries like ours, embarking on a large-scale, planned programme of development.

The traditional treatises on economic theory neglect the monetary problems, their working and their impact on the physical side of the economy. The main reason for this was that the classical economists emphasized the role of money only as the medium of exchange and not as store of value. "It is a peculiarity of all systematic treatises on orthodox economic theory that there is no minor connexion and integration of monetary theory with the central theory of prices. Usually the monetary theory is only a much loose appendix to the theory of price formation."¹ The phrase "money is only a veil" recurs again and again.² Actually for various reasons it is quite difficult to integrate the two aspects of the economies in theory viz the monetary and physical aspects. The two are interconnected and if monetary forces are not in balance, the physical side of the economy is bound to experience a change. The way in which monetary forces behave as to remain neutral in their impact on the making of the economy is called monetary equilibrium.

We must remember that monetary forces have an inherent tendency to generate a cumulative disturbing effect on the economy, once they are not in balance. The physical side of the economy if there is neutrality of monetary forces, is however automatically restored to its equilibrium if it is disturbed. For this reason the study of monetary equilibrium has become all the more imperative. The reason why monetary theory cannot be integrated into the general theory of demand and supply as

¹ Gunnar Myrdal 'Monetary Equilibrium', p. 10.

² *Ibid.*, p. 11

such is precisely this that two aspects of the economy are quite different. For example in the market the price of any commodities determined by the strength of its demand and supply but while other goods and services leave the flow of circulation when they are finally purchased by consumers, money stands its guard the axe of money does not destroy it or take it out of the circulation flow. Similarly while in general equilibrium theory we can analyse the conditions of equilibrium with reference to a moment of time, in monetary theory we cannot do so. Money has the peculiar characteristics of store of value and the ability to get contracts made in its terms. Inevitably the introduction of money brings the theory to a lower level of abstraction and makes it more realistic and dynamic in nature. Again while other goods and services have their own utility money has not. Demand for money is derived from the demand of other goods and services which in turn depends upon their prices (which is the reverse of the value of money). This circular reasoning and the difficulty that money as such does not leave the flow when it is used, makes the problem quite complicated. It becomes necessary to analyse the conditions from which the monetary side will not disturb the economy. When money forces are in such a state of affairs, we term the situation as that of monetary equilibrium.

Now the question arises how to recognize whether in any particular situation monetary equilibrium exists or not? In other words, what are the main criteria of monetary equilibrium? In order to do this it has to be noted first that once monetary equilibrium is disturbed it generates a cumulative tendency for the economy to deviate away from its equilibrium position unless counteracting forces are not created to check it. When the economy is in balance, naturally such a balance can be only of stationary type with minor changes in individual items. Such an economy, further, will not be even progressing or decaying for such a process involves change, which means disturbance of equilibrium. The existence of monetary equilibrium can be discovered only *ex post*, after the event. We can take some past period and find out whether the economy has undergone a process of change or not and on that basis we will be able to find out whether monetary equilibrium has existed in that period or not. Further on that basis, if the monetary equilibrium has not been there, we can judge on which side of equilibrium position the economic system has moved. Since no economy is likely to remain in equilibrium for a very long time, and since it will become difficult to judge in that case whether the economy has remained in equilibrium or not, it is necessary that the period taken must be reasonably short one. In that period, we take various elements in the economy and see how they behave. These elements are the crucial elements which go to influence the investors' decisions. These elements are

1 Revenue and cost gains or losses, and 2 the portion of the investment gains and losses which consist in a difference between the anticipated production cost of real capital and the actually realized cost." The first of these elements deals with profits and losses of investment and therefore induces the investors to move further on towards expansion or contraction. The second element indicates to what extent the expected price of various factors of production and other technical relations are being realized. If calculations have been made in the wrong way, there will be a difference between the expected and realized costs and hence an inducement to contract or expand the economy. If the economy is in the phase of contraction, "value of the first is negative, but of the second positive the sum total is negative. In the upward movement the reverse is true. In a state of monetary equilibrium this aggregate of the indicated gains and losses for the economy as a whole should be zero. Its magnitude should be a measure of the intensity to deviate from equilibrium in one or the other direction.

Now in order that the monetary equilibrium should exist certain conditions must be satisfied. In this connection it is well to remember that Wicksell the propounder of monetary equilibrium basis, used the concept of what he variously called the "real" the "normal" or "natural" rate of interest as distinguished from the market rate of interest. This natural rate according to Wicksell refers to the productivity of investment which the investors will be comparing with the market rate of interest. If the productivity of investment or the natural rate is more the people will invest and if it is less they will curtail investment. We have seen the main criteria or the indicators of monetary equilibrium which will be there only if monetary equilibrium is realized and according to Wicksell monetary equilibrium can be there only if natural rate of interest is equal to market rate. If the two differ a cumulative process away from the equilibrium position starts and never stops till by some means or other the equality between natural and market rate is brought about. For example if natural rate is greater than market rate, it is profitable to make investment and the process of changed production of consumption and production goods will start and so long as natural rate remains greater than market rate there is no reason why this expansionary process should stop. This concept of natural rate was later on used with advantage by Keynes in the form of marginal efficiency of capital, which is the expected net return on investment. Keynes explained that investors will increase or curtail their investment plans according as marginal efficiency of capital is greater than or less than the rate of interest.

Now this condition that if monetary equilibrium is to exist equality between natural and market rate is to be brought about works through three different manifestations of price formation

- 1 in the field of production
- 2 in the field of capital market
- 3 in the field of commodity market

We can say that in order that monetary equilibrium may exist certain conditions in these three fields should be satisfied which briefly are as follows —

(1) In order that investors should have any additional inducement to investment or to curtail investment marginal physical productivity of capital must be equal to the natural rate. However, we can very well see that such a condition is really not adequately stated. Wicksell apparently lost sight of the fact that this marginal physical productivity in itself cannot have any meaning for investors. They will be interested in the monetary profits of their investments and therefore we should think not of the marginal physical productivity but of the marginal revenue productivity of investment.

(2) Having found demand for capital on the basis of natural and market rate of interest it is further necessary that demand for and supply of savings in the capital market must be equal in order that market rate of interest should not change. Savings according to the classical economists are a direct function of the rate of interest while the demand for investment is a direct function of the natural rate and an inverse function of the market rate. In order therefore that investment plans should not undergo a change it is necessary that equality between natural and market rate should also be able to bring about an equality between saving and investment.

(3) The third condition that in the commodity field prices of consumption goods should be stable follows from the above two conditions. The condition of stable capital goods prices is not necessary because the demand for and hence the prices of capital goods are derived from the prices of consumption goods. In the case of equilibrium therefore production and prices in the consumption goods sector must show stability.

Now let us turn to the suitability of the criteria of monetary equilibrium in the context of Indian conditions. It is apparent that the existence of monetary equilibrium implies a static state for an economy. The moment an economy undergoes a process of change monetary equilibrium cannot be said to exist. Further it is necessary that the way we have analysed the conditions of monetary equilibrium the monetary and financial institutions of the economy should be very sensitive. If the concept of monetary equilibrium is to have any useful meaning it is necessary that the economy must have a developed money market, investment market and other financial institutions so that small changes in

natural and market rate are quickly and constantly transmitted to various nerve centres of the economy pushing the economy towards the equilibrium or away from it. Now in an underdeveloped country like India we find firstly that the requisite sensitivity and maturity of various organs of the economy are not found for the concept of monetary equilibrium to have any useful meaning, and secondly even if monetary equilibrium was a concept applicable to such an economy it would not be desirable to try to attain it. In India money market is not fully developed. Quite a large portion of Indian economy is still doing its working through barter mechanism. The institutions of monetary economy are either mostly unknown or underdeveloped in the country side. Even in the cities we have separated developed commercial banking sector and the indigenous banking sector. Further in India the investment markets and other financial institutions are not well developed so as to take continuous notice of changes in the market rate and 'natural rate' and react to it. The availability of capital is not a matter of asking for it but a matter of one's own strength and contacts. Lastly what India needs today is not an abstract theory of what monetary equilibrium is but a concrete thesis as to the various measures she should adopt for the development of her economy. Though Myrdal says that the conditions of monetary equilibrium do not signify a virtual reality or tendency, but only state the conditions necessary in order that the actual economic development in progress shall not follow a Wicksellian cumulative tendency still such a context of only an economy which satisfies certain conditions of its own. In India we have far greater rigidities in the form of technical and social blockades than are usually thought of. Our problem is not to generate a cumulative process upwards which should be quite an easy task in a developed economy but to generate forces of real development in a planned and co-ordinated manner. We have to think of real balances and problems of creation of real resources we have to think of creating an imbalance in the present situation not in the monetary sphere but in the real sphere in order that India should progress economically. The notions like monetary equilibrium will not help us in our task.

POINTS TO REMEMBER

1 *The traditional economic theory does not allow any active role of monetary forces regarding their effect on physical aspects of the economy. It regards monetary forces as neutral which, in fact often they are not.*

2 *It is quite difficult to integrate the monetary and general equilibrium theory into one because of certain differences e.g., (a) while other goods and services leave the flow of circulation when sold finally, money does not, (b) general equilibrium can be treated at*

spite of an abundance of money in circulation. Inflation could be defined as a situation in which too much money chasing too few of commodities causes an abnormal rise in the general level of prices. A rise in the prices taken by itself is not however a conclusive proof regarding the existence of inflationary conditions in the economy. Floods, droughts, pests and diseases might destroy crops in a particular year thus causing a great rise in the prices of agricultural commodities. A curtailment in the supply of industrial raw materials such as cotton, jute, oil seeds etc. might consequently hamper the production of some industrial commodities as well, leading to a rise in their prices. Such a rise in the general level of prices could not possibly be designated inflation in the right sense of the term. Inflation originates primarily from the pumping into circulation of too much of money as during a period of war or during a period of rapid economic development when a large quantity of money gets expended due to the exigencies of a war or the inevitable needs of a rapidly growing economy. For inflation to come into existence, the rise in prices must necessarily originate from the existence of too much of money in circulation in a given situation in which the other things remain normal, prior to the origin of the change in the supply of money. The situation undergoes a radical change subsequent to the increase in the supply of money. The prices register a steep rise because of the impact of excessive demand owing to too much purchasing power in the hands of the buyers. The indicator par excellence of the existence of an inflationary situation is a great rise in prices brought about by a great increase in the quantity of money in circulation.

The apparent contradiction involved in the existence of high rates of interest during a period of inflation arises from the fact that the rates of interest continue to rule high, despite an enormous increase in the quantity of money in circulation. Seemingly, this goes against the law of supply which states that an increase in the supply of a commodity, other things remaining equal, brings about a fall in the price. Accordingly, an enormous increase in the supply of money as during a period of inflation ought to bring about a fall in the rates of interest which is nothing but a form of price paid for the services of money. This should happen, should the other things remain equal as postulated by the law. There is, however, a possibility that the rates of interest might remain high in spite of the increase in the supply of money. The reasons for the existence of this phenomenon are to be sought in an analysis of the other things which are closely connected with the determination of the rates of interest in a given situation.

In accordance with the liquidity preference theory of the rate of interest, what determines interest is the demand for, and the supply of money. The demand for money arises out of the liquidity preference of the people to satisfy their precautionary transactions and speculative motives. The supply depends on the

monetary and fiscal policies of the state. The demand for and the supply of money, taken in conjunction would determine the structure of the rate of interest. The existence of an inflationary situation implies a state policy which injects large quantities of money into circulation. In other words, it connotes a great increase in the supply of money.

If the rates of interest are to be high in spite of a great increase in the supply of money, there must be a serious cause operating on the side of demand which not only annuls the excess of supply but leaves such a powerful impact on the market, that the rates of interest continue to rule high. The precise point to consider is why there should be such a great rise in the demand for money during a period of inflation as to sustain interest rates at a high level even in the face of an enormous increase in the supply of money.

According to the Keynesian school of thought, the most important component of factors that influence the demand for money is the motive for speculation in capitalist society. This motive gets tickled sharply during a period of inflation in view of the bright prospects of amassing a fortune within the shortest period possible with an indulgence in speculative activities. The risks of speculation are by and large eliminated owing to the almost assured further rise in prices which inflationary conditions are bound to generate. Consequently the rash as well as the not so rash sort of entrepreneurs can very conveniently look forward to making a fortune, availing themselves of the opportunity offered by the prevalence of inflationary conditions in the economy. Forward marketing marks a brisk and swift expansion, leading to an enormous increase in the demand for money. In view of the great expectations regarding profit possibilities, the entrepreneurs would not regard even an abnormally high rate of interest too much to get the necessary resources to indulge in speculation. Here is a possible explanation as to how and why the rate of interest is likely to remain high during a period of inflation.

During a period of inflation, generally speaking, there is brisk economic activity due to the increase in the purchasing power in the hands of the buyers. There is an usually quick turn over of business with an unprecedented expansion of economic activities. More and more of money is required to satisfy the transactions motive. The total volume of business expands so much that each person handles more of money than before and hence, the total monetary requirements of the community mark a remarkable increase. Consequently, even the ever increasing quantity of money is felt to be insufficient to satisfy the requirements of the community.

During periods of rising prices the marginal efficiency of capital increases enormously, providing all too tempting incentives to the entrepreneurs to undertake large scale investment to make

hay while the sun shines. Every entrepreneur would like to make a fortune prior to the arrival of a "crash" and hence, the demand for investment and quick turn over marks a tremendous increase, creating an unusually big demand for money. In view of the unexpectedly high marginal efficiency of capital, the borrowers do not mind paying unusually high rates of interest. There is always a comparison between the marginal efficiency of capital and the rates of interest to be paid for different types of loans and so long as the former exceeds the latter by a fairly good margin, no rate of interest is too high.

In a capitalist economy, the entire machinery of production turns on the lever of the behaviour of profits and inflationary conditions so long as there are no fears of a downward turn, offer an excellent opportunity of making a fortune, unless there is a hyper-inflation in which the costs rise sharply to upset the profit calculations, rising prices invariably provide the best incentive for brisk business and this seems to be the principal explanation as to how the rates of interest could possibly continue to rule high in spite of an enormous increase in the quantity of money. It would be wrong to concentrate attention on only one side—the enormous increase in the supply of money, and contend that increased supply ought to bring down the rate of interest. The demand side is equally powerful. The result depends on a tug of war between the two.

POINTS TO REMEMBER

1. There is an apparent state of inconsistency in the co-existence of inflation and high rates of interest.

2. Inflation implies an enormous increase in the quantity of money. Despite an increase in the supply of money why should the interest rates be high?

3. The explanation of the demand for money in terms of the Keynesian liquidity preference theory.

4. The great increase in speculation during a period of inflation in relation to the demand for money.

5. Expansion in business and the need for more and more of money.

6. Comparison between the rates of interest and the marginal efficiency of capital.

SELECT READINGS

1. Robertson, D H. *Essays in Monetary Theory*

2. A T A. *Readings in the Theory of Income Distribution*

Q. 10 "The rate of interest is determined by the demand for idle balances in conjunction with the supply of money over and above the needs of transaction." Discuss. (Delhi 1960)

Examine the statement that the demand for money depends upon the interest rate and the level of national income. (Poona 1959)

Examine critically the full implications of the statement that the rate of interest depends primarily on the decision about the form in which wealth shall be held (Delhi 1958)

What is the contribution of Keynes to the theory of interest? How, according to the Keynesian theory, does the rate of interest affect income? (I.A.S. 1955)

Ans. According to this theory, interest is not a reward for "waiting" or abstaining from consumption as the classical school defined it, but "a reward for parting with liquidity for a specified period" or for not hoarding. Interest is not only paid for money. The possession of money lulls our disquietude and interest is the price which has to be paid to the lender to affect the disquietude involved in parting with the liquidity.

The rate of interest according to Keynes is determined by the supply of money on the one hand and the demand for money or the "liquidity preference" on the other. The supply of money is fixed by the banking system and cannot be altered by the public and therefore, at any point of time it may be taken to be given and constant. The real determinant of the rate of interest is then the liquidity preference.

But what is precisely meant by the phrase liquidity preference? In plain sense, it means the demand for money for using it for those purposes which money performs in the economic system e.g., serving as the unit of account and medium of exchange. In the technical sense, the concept of liquidity preference implies the preference of the people to hold wealth in the form of liquid cash to other illiquid forms like bonds, securities, bills of exchange, land, gold, capital equipment etc. This demand for holding money in the form of liquid cash should be clearly distinguished from the demand for income. Income is a means to satisfy wants and since human wants are unlimited the demand for income is infinite. But the demand for money is limited—it is not always wise to hold whole of income or wealth in the form of liquid cash. For, the holding of money involves on the one hand a cost—the interest lost, that is, the interest income that could be earned by lending it to others. The holding of money, on the other hand, lulls our disquietude. Every individual strikes a balance between the gain and loss and decides how much of his wealth he would hold in the form of liquid cash and how much in other illiquid forms.

Put why do people prefer to hold liquid cash to other forms?

What is the explanation of the phenomenon of liquidity preference ? Here Keynes gives us the psychological motives which induce people to demand money or hold "idle cash balances". People demand liquid cash on account of the three fundamental motives namely, the "transaction motive" the "precautionary motive" and the "speculative motive".

The transaction motive refers to the desire of the people to hold wealth in the form of liquid cash in order to conduct smoothly the day to day transactions or as Keynes has put it "to bridge the interval between the receipt of income and its disbursement".¹ The average amount that a person keeps for transaction purposes depends upon the size of his income, the length of the interval of the receipt of the income and the method followed in regard to payments. The precautionary motive represents the desire to hold cash balances in order to be able to meet any unforeseen contingencies in future like illness, unemployment etc without any difficulty. The amount of money required for satisfying this motive will differ widely with individuals and business firms according to the level of income, the state of social security, the nature of business, access to the credit market and so on.

The speculative motive refers to the desire to hold money in order to make a capital gain. It is possible for people to make capital gains by borrowing money when the rate of interest is low and lending it later to people when the rate of interest rises. Alternatively, the speculators can secure profits by purchasing bonds when their prices are low (*i.e.* the rate of interest is high) and selling them when their prices are high (*i.e.* the rate of interest is low).

The transaction and precautionary demands for money are mainly "a resultant of the general activity of the economic system and of the level of money income". The first two types of demand for money are fairly stable and constant over a short period of time as the levels of income and employment are not subject to significant changes over the short period. The speculative demand on the other hand belongs to an entirely separate category. It is highly responsive to changes in the rate of interest. If there is a change in the rate of interest, the cause is to be sought in the changes in the speculative demand rather than in the changes in the transaction and precautionary demands as they are more or less stable. That is why Keynes settles down upon the speculative demand for money as the real and ultimate determinant of the rate of interest. This type of demand arises on account of the uncertainty regarding the future rate of interest. The speculators hold cash on the basis of their individual expectations about the future rate of interest but no one knows

1. Keynes—*op. cit.* p. 191

2. Keynes—*op. cit.* p. 190

for certain what exactly the rate would be. It is this "uncertainty as to the future course of the rate of interest which is the sole intelligible explanation of this type of liquidity preference."

Let M_1 be the total quantity of money held by people for the transaction and precautionary purposes, y the level of income and L_1 the liquidity function corresponding to the transaction and precautionary demand for money. Then we have,

$$M_1 = L_1(y)$$

If M_2 be quantity of money held for speculative purposes, r the rate of interest and L_2 the liquidity function relating to the speculative demand, then we have

$$M_2 = L_2(r)$$

If M be total supply of money, then the composite liquidity function can be written as

$$M = M_1 + M_2 = L_1(y) + L_2(r)$$

or $M = L(r, y)$

In the liquidity function it is postulated by Keynes that the demand for money is positively correlated with income—an increase in the level of income implies a rise in the demand for money and vice versa. On the other hand it is negatively correlated with the rate of interest—a rise in the rate of interest reduces the demand for money or in other words, an increase in the demand for money leads to a rise in the rate of interest and vice versa.

In Fig. 1, OM represents the supply of money which may be taken to be given and constant and that is why the supply of money curve is OM a vertical straight line. The LPy_1 curve represents the demand schedule of money at a level of income y_1 . It is downward sloping showing the negative correlation between the interest rate of and the demand for money. The rate of interest r_1 is determined at the point P_1 where the supply of money is exactly equal to the demand for money. Now, if the liquidity preference schedule rises to LPy_2 on account of an increase in income to y_2 , the rate of interest would rise from y_1 to y_2 . Similarly, if the supply of money increases, the liquidity preference schedule remaining unaltered, the rate of interest would fall.

How does a change in the rate of interest affect the levels of income and employment?

The rate of interest affects the levels of income and employment through changes in the volume of investment. A fall in the rate of interest, for instance, raises the level of investment until the marginal efficiency of capital equals the reduced rate of interest. An increase in investment through the multiplier leads to a multiple increase in income and employment.

POINTS TO REMEMBER

1 According to the Keynesian liquidity preference theory of interest the rate of interest is determined by the demand for idle balances in conjunction with the supply of money

2 The liquidity preference or demand psychological motives namely, the transaction, precautionary and speculative motives. The first two are more or less stable and it is the speculative motive which is the real and ultimate determinant of the rate of interest

SELF-READINGS

- 1 Keynes *General Theory* Ch 13
- 2 Kurihara *Introduction to Keynesian Dynamics*, Ch 4
- 3 Hansen *Guide to Keynes* Ch 6
- 4 Dillard *Economics of J M Keynes* Ch 8 (pp 164-180)

Q 11 Do you agree with Keynes criticism of Classical Theory of Interest? How far is his own reformulation an improvement upon the latter? (Gujarat 1959)

Do you agree with the view that the Keynesian theory of interest like the classical, is indeterminate? (Calcutta 1957)

Ans In a nutshell the classical theory of interest is that "interest is a reward for 'waiting' (or saving and abstaining from the present consumption) and the rate of interest like the price of a commodity is determined by the supply of and demand for capital

The demand for capital depends upon the marginal productivity of capital which in turn depends upon the amount of investment, the amount of investment being determined at the point where the marginal productivity of capital is equal to the rate of interest. On the supply side, the supply of capital depends upon the rate of interest, higher the rate of interest greater would be the propensity to save and larger would be the supply of capital. In the classical theory the rate of interest is viewed as the 'equilibrating mechanism' which equates the supply and demand for savings. If at any time, the demand for capital falls, the rate of interest is supposed to fall and lessen the supply of capital to correspond to the reduced demand for capital. If, on the other hand, savings increase more than investment, the rate of interest is supposed to fall until savings and investment are equal again.

In the diagrammatic terminology, S_1, S_2 represents the supply

function of savings it is upward sloping showing that more is saved at a higher rate of interest and *vice versa*. I_1D_1 represents the demand curve of investment which is downward sloping showing that the demand for capital increases with a fall in the rate of interest and *vice versa*. The market rate of interest r_1 is determined at the point P_1 where I_1D_1 and S_1S_2 intersect. If the demand for capital falls as shown by the shift of I_1D_1 downward to I_2D_2 , the rate of interest would fall from r_1 to r_2 .

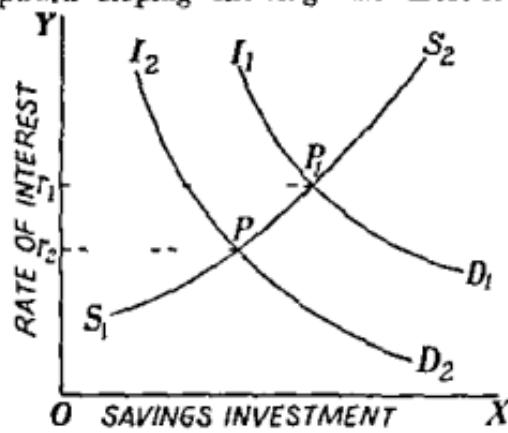


Fig. 1

The first attack of Keynes on the classical theory is that interest is not a reward for saving as the classical school defines it. For one can get interest for lending money which he has not saved but inherited from the forefathers. On the other hand, "if a man hoards his savings in cash, he earns no interest though he saves just as much as before".¹ According to Keynes, interest is not the reward for abstaining from consumption but for "parting with liquidity".

The really damaging Keynesian criticism of the classical theory, however, is that in the classical scheme the rate of interest is in fact 'indeterminate'.² According to Keynes, the investment schedule and the savings schedule are not independent as is supposed by the classical economists but are functionally interdependent—and one cannot change without altering the other. In the diagram, when investment schedule falls from I_1D_1 to I_2D_2 , the income will fall and this would lead to a reduction of savings since as Keynes points out savings are a function not only of the rate of interest but also of the level of income. But the above diagram does not contain enough data to tell us by how much the savings would fall. Thus as we are not in a position to draw the savings schedule corresponding to the reduced investment schedule I_2D_2 , the rate of interest is indeterminate. The classicists committed this serious mistake by ruling out fluctuations in income and assuming instead a constant level of income corresponding to full employment.

The classical view that the rate of interest is the "equilibrating factor" between savings and investment (that increased

1 J. M. Keynes—*General Theory of Employment, Interest and Money*, p. 162.

2 Keynes—*op. cit.* p. 181–187.

savings by reducing the rate of interest leads to a corresponding increase in investment) has also been challenged by Keynes. As he has put it, "The rate of interest is not the price which brings into equilibrium the demand for resources to invest with the readiness to abstain from present consumption. It is the price which equilibrates the desire to hold wealth in the form of cash with the available quantity of cash."¹

Indeed, Keynes does not deny the influence of the rate of interest upon savings and investment. He is prone to accept the view that an increase in the volume of savings will reduce the rate of interest and a reduced rate of interest will tend to increase investment. But as he rightly points out, the effect is not so certain. The increased savings and the consequent fall in the rate of interest need not stimulate investment if the prospective yield on capital is depressed. Very often a diminution in the propensity to consume depresses the marginal efficiency of capital and thus has an adverse effect on investment. Keynes is also willing to accept the view that more will be saved at a higher rate of interest than at a lower rate *out of a given income*. But as soon as changes in income are brought into the picture, savings seem to be interest inelastic. A rise in the rate of interest will actually lead to a decrease in the amount of savings. For when the rate of interest rises, investment falls and a fall in investment causes a decline in income and out of a smaller income less will be saved. The fall in savings will be just equal to the fall in investment since the two were equal before income fell and must be equal after the fall in income. Thus according to Keynes, it is the income and not the rate of interest which ensures the equilibrium of savings and investment. Hence the oft quoted statement of Keynes: "Savings and investment are the determinants of the system, not the determinants."²

Another serious flaw in the classical theory of interest is that the classicalists took into consideration only the two functions namely, unit of account and medium of exchange and completely ignored the function of money as a store of value or what Keynes calls "a link between the present and the future". This was quite natural for the classical economists who accepted Say's Law of Markets and were concerned with the long period static equilibrium.

All these differences between the classical school and Keynes arise on account of the fact that while the classical theory is based upon the implicit assumption of full employment and a given level of income corresponding to it, Keynes makes room for

1 Keynes—*op cit*, p 16

2 Keynes *op cit* p 183

changes in the levels of income and employment. As a writer has put it "The difference between the traditional theory of interest and Keynes' monetary theory of interest is a fundamental aspect of the difference between the economics of full employment and the economics of less than full employment".¹

Keynes by rejecting the classical theory on the grounds noted above has advanced an alternative formulation of the theory of interest called the Liquidity Preference Theory of Interest. According to this theory interest is a payment made for parting with liquidity or for not hoarding and is a purely monetary phenomenon. The rate of interest is determined in the market by the supply of money on the one hand and the demand for money or liquid cash on the other.

Money in the form of liquid cash is demanded by people for many reasons. In the first place people want to hold some money for carrying out day to day transactions. Keynes calls this the 'transaction demand for money'. Secondly the people also keep some surplus cash as a measure of precaution to meet unforeseen contingencies like unemployment, illness etc. Keynes describes this as the 'precautionary demand for money'. Thirdly there is the 'speculative demand for money'—the people hold money 'with the object of securing profit from knowing better than the market what the future will bring forth'. The speculators borrow money when the rate of interest is low and lend money when the rate of interest rises or purchase bonds when the bond prices fall. This motive arises on account of the uncertainty regarding the future rate of interest. As Keynes has put it "uncertainty as to the future course of the rate of interest is the sole intelligible explanation of this type of liquidity preference".² The transaction demand and the precautionary demand for money depend primarily upon the level of income and only remotely upon the rate of interest. The speculative demand for money is however highly interest elastic and Keynes attaches great significance to this as the determinant of the rate of interest.

If M_1 be the quantity of cash held by people for the transaction and precautionary purposes by the level of income and L_1 the liquidity function corresponding to the transaction and precautionary demands for money, then we have

$$M_1 = L_1 (y)$$

If M_2 be the quantity of cash held for speculative purposes by the rate of interest and L_2 the liquidity preference function relating to the speculative demand for money, then we have

$$M_2 = L_2 (r)$$

¹ D. Ward—*The Economics of J. M. Keynes*

² Keynes—*op. cit.* p. 201

If M be the total quantity of money in circulation then the composite liquidity function can be represented as

$$M = M_1 + M_2 = L_1(y) + L_2(r)$$

or $M = L(r, y)$

In Fig. 2 the quantity of money in circulation e , the supply of money is represented by OM . This can be regarded as given and constant at any point of time as money cannot be created by the public and for this reason the supply of money curve QM is a vertical straight line showing that the quantity of money in circulation is absolutely inelastic in response to changes in the rate of interest. LPy_1 represents the demand for money or liquidity preference of the public and is downward sloping showing that the demand for money increases with a fall in the rate of interest and vice versa. As the demand for money also depends upon the level of income a liquidity preference curve represents the demand for money corresponding to a given level of income.

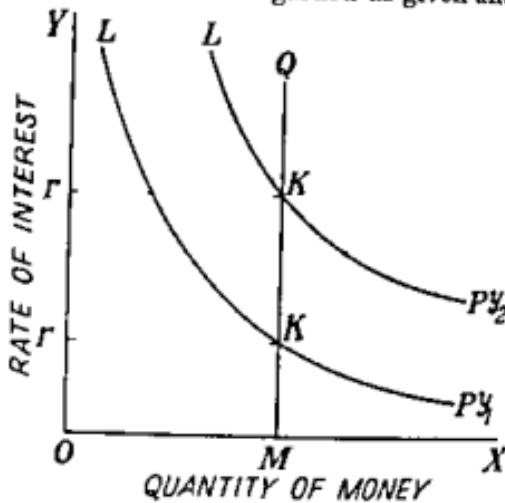


Fig. 2

Given the level of income y_1 and the quantity of money in circulation OM the rate of interest r is determined at the point K where the supply of money equals the demand for money. If the liquidity preference curve now rises to $LP'y_2$ on account of a rise in the level of income to y_2 the rate of interest rises to r' .

The Keynesian theory of interest is an improvement over the classical theory in that by introducing the dynamic role of money as a link between the present and the future and the consequent speculative demand for money Keynes emphasizes how uncertainty and expectations exert a significant influence on the levels of income and employment through the rate of interest.¹ The classical economists on the other hand by abstracting from the function of money as a store of wealth represented interest as a non monetary phenomenon.

But as Prof Hansen has aptly shown the Keynesian theory suffers from the same fundamental flaw as the classical theory

¹ Kurzara, *Introduction to Keynesian Dynamics*, p. 72.

The Keynesian theory like the classical theory is also "indeterminate".¹ To understand this let us revert to Fig 2. In Fig 2, according to Keynes when the liquidity preference curve rises to $L_1 P_{1y_2}$, the rate of interest would also rise to r^1 . But as Hansen contends the change in the rate of interest cannot be independent of the level of income. When the rate of interest rises, investment will fall off as the level of investment is dependent upon the rate of interest. A fall in the level of investment would bring down the level of income and a reduction in income implies a decline in liquidity preference so that the rate of interest would fall but we do not know by how much it would fall.

POINTS TO REMEMBER

1. The fundamental Keynesian criticism of the classical theory is that the savings function cannot change independently of the investment function. Since the classical theory does not provide for the change in income, it is indeterminate.

2. The Keynesian theory is also indeterminate because the liquidity preference function cannot change independently of the investment function.

SELECT READINGS

- 1 Keynes *General Theory* Ch 14
- 2 Hansen *Guide to Keynes* Ch 6 Ch 7 pp 140—141
- 3 Dillard *The Economics of Keynes* Ch 8 (pp 164 180 189 193)

Q 12 To what extent is it correct to say that the rate of interest is a highly psychological phenomenon? Explain, in the light of your answer, why short term rates tend to fluctuate more than long-term rates of interest. (Delhi 1959)

"In Keynesian theory the rate of interest is what it is because it is expected to become other than it is if it is not expected to become other than it is, there is nothing left to tell us why it is, what it is." Discuss. (Bombay 1957)

Ans: According to Keynes, the rate of interest is 'a highly psychological phenomenon'² and plays a significant role in the fluctuations of income and employment in a capitalist system.

Keynes' Liquidity Preference Theory of interest states that the rate of interest is determined by the supply of money on the one hand and the demand for money on the other. As the supply of money is given at any point of time (it is determined by the banking system and cannot be created by the public) the rate of interest is determined by the liquidity preference or the preference

1 Hansen—*Guide to Keynes*, p 140

2 Keynes—*General Theory*, p 202

of the public to hold wealth in the form of liquid cash to illiquid assets like bonds, securities etc

What is the explanation of the phenomenon of liquidity preference? Why do people demand ready cash in preference to income yielding bonds, securities etc? Here Keynes gives us the three broad motives for holding money namely, transaction motive, precautionary motive and the speculative motive

The transaction motive refers to the desire to hold wealth in the form of liquid cash in order to carry on smoothly the day to day transactions or as Keynes has put it, 'to bridge the interval between the receipt of income and its disbursement'.¹ The precautionary motive refers to the desire to hold cash in order to be able to meet any unforeseen contingencies in future like illness, unemployment etc without any difficulty. The speculative motive is by far the most significant one and Keynes regards this as the ultimate determinant of interest. The speculative demand for money means the desire to hold money in order to make a capital gain. It is possible for people to make capital gains by purchasing bonds when their prices are low (*i.e.* when the rate of interest is high) and selling them when their prices are high (*i.e.* when the rate of interest is low).

Now the transaction and the precautionary demands for money are mainly a resultant of the general activity of the economic system and of the level of money income.² These demands are rather insensitive to changes in the rate of interest. The speculative demand for money, however, belongs to an entirely separate category. It is insensitive to changes in the levels of income and employment and is highly interest elastic. The changes in the levels of income and employment are however, insignificant over a short period of time. If there is a change in the rate of interest, the cause is to be sought in the speculative demand rather than in the transaction and precautionary demands for money. That is why Keynes emphasizes this as the ultimate determinant of the rate of interest.

This speculative demand for money is a highly psychological factor. The speculators hold money 'with the object of securing profit from knowing better than what the future will bring forth'.³ This is because of a special kind of uncertainty which surrounds the rate of interest. If the speculator expects the rate of interest to fall in future (or the bond prices to rise) he will give up cash and purchase bonds instead. If his expectation materialises *i.e.* if the rate of interest actually falls, he will be able to reap a capital gain. But no one knows for certain what the future rate of inte

1 Keynes—*op cit.*, p 195

2 Keynes—*op cit.* p 196

3 Keynes—*op cit.* p 190

rest would actually be. It is this "uncertainty as to the future course of the rate of interest which is the sole intelligible explanation of this type of liquidity preference".¹

As nobody can be certain about the future rate of interest, everyone forms his own estimate on the basis of his individual expectations. The individuals who think that the current rate is above the "safe" or the "conventional" rate of interest and is likely to come down in future will purchase bonds in the hope of selling them at higher prices later. In the terminology of the stock exchange market these individuals are called "bulls". On the other hand, these speculators who expect that the rate of interest will rise in future sell out securities and acquire liquid cash. These individuals are called "bears". The market strikes a balance between the two opposite categories of expectations. The balance of expectations about the future rate of interest influences the actual rate of interest. Thus there are complex psychological influences working upon the rate of interest and that is why Keynes describes the rate of interest as "a highly psychological phenomenon". It is also clear why Prof. Robertson states that in the Keynesian theory "the rate of interest is what it is because it is not expected to become other than what it is—if it is not expected to become other than what it is, there is nothing left to tell us why it is".² In other words, in the ultimate analysis, the rate of interest is in fact determined by the expectations of the public regarding the future rate of interest.

In what sense can it be said that the rate of interest primarily depends upon the decisions about the form in which wealth is held? The answer is obvious. The speculative demand is nothing but the desire to hold wealth in the alternative forms of wealth e.g., liquid cash, bonds, securities, bills of exchange, etc. If the rate of interest is high, the cost of liquidity is large and people would reduce their holdings of wealth in the form of money. If the rate of interest is low, the cost of liquidity is small and therefore, people shift from other forms of assets to money. These actions react upon the rate of interest through the demand for money function. Similarly, if people expect the rate of interest to fall, they would give up liquid cash and purchase bonds. The rise in the demand for bonds would raise the bond price which would ultimately affect the rate of interest.

The short term rate of interest is subject to greater fluctuations than the long term rate of interest. This is because of the fact that over the short period, the speculative demand for money, as we have seen, changes very widely. But over a long period of time the expectations of contrary nature cancel themselves out.

1. Keynes—*op. cit.*, p. 201.

2. D. H. Robertson—Mr. Keynes and the Rate of Interest in *Readings on the Theory of Income Distribution*.

leaving very little influence upon the rate of interest. That is why the long term rate of interest is relatively stable¹

POINTS TO REMEMBER.

1 The rate of interest is "a highly psychological phenomenon because the speculative demand for money which is the ultimate determinant of interest is a psychological factor

2 The speculative demand determines in what form wealth is held, the rate of interest depends upon the decisions about the forms in which wealth is held

3 As the speculative demand for money changes more violently in the short period, the short term rate of interest fluctuates to a greater extent than the long term rate of interest

SELECT READINGS

- 1 Keynes General Theory, Ch XV
- 2 Kurihara Introduction to Keynesian Dynamics, Ch II
- 3 Robertson Mr Keynes and the Rate of Interest in the Endings in the Theory of Income Distribution (American Economic Association)
- 4 Lerner, A P Alternative Formulations of the Theory of Interest
- 5 Harris (ed) New Economics

Q 13. What is the explanation of relatively low rates of interest in underdeveloped countries even though such economies suffer from shortage of capital? (Panjab 1999)

In an underdeveloped country capital is scarce and yet the marginal efficiency of capital is low. How do you explain this? (H B C S 1999)

Ans The term "underdeveloped" country refers in plain language to a backward or poor country with a low level of per capita real income. An underdeveloped country has certain distinct and peculiar characteristics. In the first place, the underdeveloped country is predominantly agricultural. Agriculture accounts for 60-70% of employment and national income as compared to 15-20% in the advanced industrial countries like the U.S.A., Soviet Russia, Germany etc. Secondly, the underdeveloped country is overpopulated in the sense that the population is large relatively to the volume of natural resources and of capital. Thirdly, the stock of capital is limited and the rate of investment is too low. The rate of investment in the m-

developed country varies between 3.6% as compared to 15.18% in the advanced industrial countries¹. India, Ceylon, Malaya, Indonesia and most of the African countries exhibit these common characteristics and can be described as under developed countries.

It is a strange paradox that in spite of the scarcity of capital the rates of interest in underdeveloped countries are relatively low. The supply of capital depends upon the volume of domestic savings which is limited on account of the low level of real income. The level of real income is low because of low productivity which is due to the limited supply and use of capital. This is the so called "vicious circle of poverty"².

The reason why in spite of the scarcity of capital the rate of interest is relatively low in an underdeveloped economy can be explained with the help of the classical theory of interest. The Keynesian theory of interest is largely inapplicable to under developed countries because the assumptions underlying the Keynesian theory do not obtain in underdeveloped economies. In the first place Keynes assumes a highly monetised economy where all the transactions take place through the medium of money. In an underdeveloped economy, on the other hand we find a vast non monetised sector where changes in the rate of interest do not have any influence upon the nature and level of economic activity at all. Secondly, Keynes presupposes the existence of a highly developed organisation of money market with sub markets specialised in different types of monetary transactions like bills of exchange, bonds, securities etc. In such a market the liquidity preference or demand for money is highly responsive to changes in the rate of interest. In particular, the speculative demand for money is highly interest elastic and exerts a predominant influence upon the rate of interest. In an underdeveloped country, on the other hand, a developed money market is conspicuous by its absence. The specialised sub markets like the bill market, bond market etc are of limited significance. The speculative demand for money is for these reasons of limited magnitude and cannot be regarded as the ultimate determinant of the rate of interest as the Keynesian liquidity preference theory purports to show.

By rejecting therefore, the Keynesian theory as an inappropriate tool for an analysis of the problems of money and interest in an underdeveloped country we can turn to the classical theory.

According to the classical theory of interest, as we know, the rate of interest is determined by two forces namely, the supply of

¹ Me and Baldwin—*Economic Development*, p. 304.

² Nurkse—*Problems of Capital Formation in Underdeveloped Countries*, p. 4.

capital and the demand for capital. The fundamental explanation of the low rate of interest in an underdeveloped economy lies in that although the supply of capital is limited the demand for capital is also limited correspondingly. The demand for capital for purposes of investment is small on account of the fact that the inducement to invest is weak or as Keynes would put it, the marginal efficiency of capital is low. The inducement to invest is weak on account of, as Prof Nurkse has explained¹, the limited size of the market for goods and services in the underdeveloped country. The basic determinant of the size of market is the level of productivity and real income. As the level of real income of the majority of the population is extremely low, the volume of aggregate demand is not sufficient to warrant mass scale production with the help of capital-intensive techniques of production.

It is not difficult to find illustrations of the way in which the small size of the market can discourage, or even prohibit the profitable application of capital in improved techniques of production. In place of the hand made shoes if an entrepreneur introduces shoes of finer quality produced with relatively much more expensive materials and techniques, the limited demand on account of the poverty of the masses would land the entrepreneur into huge losses. To take another illustration, the private capitalists may be prepared and even willing to make large scale investments in the production of cars and television sets in India, but as very few people at the present stage of economic development would be able to afford the enjoyment of these luxuries, the willingness to invest cannot materialise. Many articles of common use in advanced industrial countries like the U.K. and U.S.A. can be sold in the underdeveloped countries in quantities so limited that the plant working only a few weeks or even days can produce enough for a whole year's consumption. This means the plant would have to stand idle for the rest of the year. Prof Nurkse quotes the instance that in Chile a modern rolling mill which is a standard equipment in any industrial country can produce in course of three hours a sufficient supply of a certain type of iron product to last the country for one year. In some cases the plants which were installed in some Latin American countries by the foreign entrepreneurs were ultimately withdrawn, because it was found that the local market was too small to warrant their operation. Under such circumstances, the limited demand for capital for investment nullifies to some extent the effect of the scarcity of capital and the rate of interest remains at a relatively low level.

This is another factor which works against large scale investment of capital in an underdeveloped country. The underdeveloped country is characterised by the existence of a large volume of unemployment and consequently labour is relatively much cheaper.

¹ Nurkse, *op. cit.* p. 6

than capital. For this reason, it is found to be much more profitable to make a greater use of cheap labour than scarce capital. The result is that the demand for capital remains at a low ebb.

The pace of investment is also held up in underdeveloped countries because of the absence of the so called external economies like electricity, water supply, means of transport and communications, roads, banking and financial institutions trained labour etc. These amenities are essential for investment in any type of industrial production and without these basic facilities private investment cannot be expected to come forth. An entrepreneur willing to set up a cloth factory would be unable to do so, if he cannot be sure of getting regular supply of power or if the means of transportation and communication are too undeveloped to use them for sending his production to the market. Thus the absence of these facilities which are so characteristic of the underdeveloped country also limits the pace of investment.

POINTS TO REMEMBER

1. The apparently strange phenomenon of the relatively low rates of interest in the underdeveloped countries in spite of the characteristic scarcity of capital can be explained by referring to the classical theory of interest.

2. The Keynesian theory of interest is of limited applicability in the underdeveloped economy because of (i) the existence of a vast non monetised sector (ii) the absence of a developed money market (iii) the limited significance of the so called speculative demand for money.

3. According to the classical theory, the rate of interest is determined by the supply of capital and demand for capital. It is true that the supply of capital is limited but the rate of interest is not high because the demand for capital for investment is correspondingly low. The explanation of the low level of demand for capital lies in that (a) the real income of the majority of the population is low and therefore, the volume of aggregate demand for goods and services is limited, (b) the relative abundance and cheapness of labour discourages large scale capital investment, (c) the absence of the basic amenities for industrial production seriously hampers private investment.

4. The net result is that the low demand for capital neutralises to some extent the potential effect of the scarcity of capital on the rate of interest in the underdeveloped countries.

SUGGESTED READINGS

1. Nurkse, *Problems of Capital Formation in Underdeveloped Countries*, Ch I
2. Mead and Ballwin, *Economic Development*, pp. 303-310
3. Keynes, *General Theory*, Chs. XIII-XIV

Q. 14 What is the difference between the "loanable funds" theory and the "liquidity preference" theory of interest? Can you reconcile the two?

Compare and contrast the loanable funds theory of interest and liquidity preference theory. Discuss the view of Hicks that the dispute between the upholders of the two theories is a "sham dispute".
(Calcutta 1956)

Ans The theory of interest like most other theories in economics has undergone an evolution and has been the subject of controversy, discussion and criticism. Broadly speaking, there are two alternative approaches to the theory of interest namely, *real* and *monetary*. The Waiting or Abstinence theory, the Azo or Austrian theory, the Classical supply and demand theory are well known instances of the real approach to the theory of interest. According to the monetary approach formulated by writers like Keynes, Lerner, Hansen and Somers, interest is a purely monetary phenomenon and it loses its distinctive characteristics in a non monetary economy. In the monetary approach there are two alternative theories namely the Liquidity Preference Theory and the Loanable Funds Theory which, although of quite recent origin have been the subject of a long and acute controversy. Referring to this, Hicks has observed in his *Value and Capital* that the controversy has been rather baseless—"a sham dispute". Although the two theories are apparently divergent, yet they are the same in substance.

Before giving a verdict as to whether the differences between the two theories are real or imaginary, and which of the two is preferable, it is essential to review the theories first.

The liquidity preference theory states that the rate of interest is the reward for parting with liquid purchasing power, viz., money. People want to have money for meeting day to day requirements (transactional demand), for meeting the emergencies (precautionary demand) and for using that money in the speculation of securities (speculative demand). Naturally, the first two sources of demand depend very much upon the income and the standard of living of the people and are not very sensitive to changes in interest rates, while the speculative demand for money really stems from variation in rate of interest. For with changing rate of interest, there arises a possibility of earning out of possible changes in the capital value of the assets. Thus investment is very sensitive to the changes in the rate of interest and we can accordingly have a liquidity preference schedule showing the demand for money at different rates of interest and corresponding supply of money. Where the two schedules intersect, the rate of interest is determined for the time being. The supply of money, however may or may not be influenced by the changes in the rate of interest as how much money to supply is the decision which the monetary authorities make.

But in the case of loanable funds theory, a single clear cut statement is not available. Whether loanable funds theory really amounts to the same thing as the liquidity preference theory or not, therefore, depends upon how we define the loanable funds and in what context the whole thing is set. However, in a general way, we say that according to loanable funds theory, the interest rate is determined by the supply and demand for loanable funds. As Leiner puts it, we can have ordinary savings and investment schedules showing the values of the variables at different rates of interest and also the schedules showing "hoarding and the supply of new money". Thus the supply of "credit" or funds available for lending would be shown by the savings of the people plus the additions to the money supply during that period, while the demand for loans would be the demand for investment plus the demand for hoarding money. Where the two combined schedules balance, the rate of interest is determined. It can be illustrated geometrically also.

S and I are the ordinary savings and investment schedules corresponding to different rates of interest. L is the curve showing the demand for hoardings at different rates (L curve is sloping downwards showing that the hoarding at higher rate of interest would be less because it costs more to hoard) and M curve shows the additional supplies of money. Adding the curves S and M, and I and L, we get the interest rate $P_1 B$.

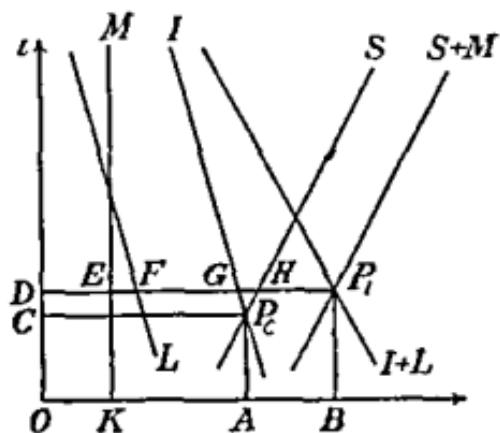


Fig. 3

Here L curve shows positive values for all the rates of interest and M is a vertical straight line, it would make no difference to the basic arguments if M changes its shape or L has also some negative values.

It may be seen that the hoarding is equal to savings - lending plus borrowing minus investment, in symbols hoarding = $S - I + b - L$. But savings = income $- C$ - consumption C , so that hoarding = $y - c - l + b - I = (y + b) - (c + l + I)$. Thus hoarding is the net change in the amount of money held (because $y + b$ = total receipts and $c + l + I$ = total money outlays) and since hoarding or dishoarding takes place only when there is a change in the rate of interest, no hoarding (or dishoarding) will take place if the rate of interest remains constant for a sufficiently long period. Thus within the system envisaged

by the loanable funds theory, while savings and investment depend upon the level of interest "hoarding" depends upon the changes in the rate of interest.

In the liquidity preference theory we have seen that the speculative demand for money¹ depends essentially upon the expectations of changes in the rate of interest and now we have seen that hoarding also depends, in a similar way, upon the changes in the rate of interest. If, therefore, the two theories are to say practically the same thing, the loanable funds theory should be converted into one in which savings and investment curves have nothing important to say. This attempt was made by Lerner. He says that since investment and savings are always equal, therefore the investment and savings curves coincide and accordingly the rate of interest we get by the intersection of $S+M$ and $L+I$ curves will be the same as that obtained by the intersection of L and M curves. But such an approach has the defect of leaving the level of income out of account. The loanable funds theory, even by recognising the equality of savings and investment cannot be stated to have become identical with the liquidity preference theory because the loanable funds theory runs in terms of flows of additional money and the demand for hoarding which naturally should (in addition to interest) be a function of the level of income also.

Hicks tried to show that the liquidity preference and loanable funds theories are the same by making use of his general equilibrium analysis. Interest is determined, like all other prices simultaneously with all the other unknown values in the economic system. The general equilibrium system is solved with the help of simultaneous equations and therefore in the system we can have one equation showing demand and supply of money and another showing the demand and supply of loanable funds. Mathematically, one equation follows from all the others put together, and therefore if we eliminate money equation, we get the loanable funds theory and if we eliminate the loanable funds equation we get the liquidity preference theory. Thus to him it is only a sham dispute between the monetary theorists.

Although there is hardly any ground for the dispute between the advocates of the Liquidity Preference theory and the Loanable Funds theory and both the theories ultimately lead to the same result there are definite grounds on which one theory is preferable to the other. The liquidity preference theory runs in terms of stocks i.e. supply of money in the short run and its demand in the short run.

¹ Major part of "total demand" since in developed countries the stock of securities is very great as compared with the transactional and precautionary demand for money, for all practical purposes transactional and precautionary demand for money can be neglected while considering the demand for money.

varying with the expectations of future interest rates. The loanable funds theory is essentially one of flows + e, so much supply of loanable funds and so much demand for loanable funds per period of time. Many theorists feel that the stock approach is better as far as the rate of interest goes. Well, on this account it may not be so. But we can certainly show that the liquidity preference theory is preferable on certain other grounds. The liquidity preference theory draws our attention to the motives for the demand for money and the changes that take place there. Loanable funds theory is weak in this respect. Liquidity preference theory is a part of a general determinate system as put forth by Keynes while the loanable funds theory has developed in the context of partial equilibrium analysis and can therefore, be a square peg in a round hole of a general determinate system.

In the case of loanable funds theory savings and investment schedules depend upon the level of interest rate and hoarding respond to changes in the interest rate. But since savings and investment must always be equal whatever the rate of interest and the level of income, the relationship between the savings and investment and interest rate becomes meaningless. It will be obvious from the attempt made by Lerner to reconcile the two theories. Since savings and investment are always equal, the same result regarding the rate of interest can be obtained from L and M curves and it is therefore, superfluous to talk of the role of savings and investment in the determination of the rate of interest. On the other hand, if we eliminate the savings and investment schedule from our consideration, we are faced with another difficulty. Suppose all the savings are lent out and all borrowings are invested and no investment takes place by any dishoarding, so that hoarding and dishoarding are both zero, then the loanable funds theory reduces to the statement that the rate of interest is determined by the demand for and supply of savings—the classical theory of interest—while we have seen above that savings and investment schedules can be left out while considering the determination of the rate of interest. In liquidity preference theory, there is no trap because there savings are supposed to be interest inelastic and the funds for investment are governed by the money supply. Savings equate themselves to investment via changes in income and the rate of interest gets ultimately determined by the supply of and demand for money. In the Keynesian system we have the liquidity preference, the marginal efficiency of capital, the marginal propensity to consume and the money supply as the ultimate determinants of the economic system and out of these the liquidity preference and money supply determine the rate of interest. There is no ambiguity or contradiction involved and, therefore, we can safely say that it is better to adhere to Keynesian liquidity preference theory rather than be lost in the wood of loanable funds theory.

POINTS TO REMEMBER

1 There have been 'real' theories of interest and monetary theories of interest

2 The distinction between money and loanable funds

3 While the liquidity preference theory has a single compact formulation the loanable funds theory wavers because of differences in the definitions of loanable funds

4 Briefly in the liquidity preference theory, supply of money is determined by the monetary authorities while the demand for money comes from liquidity preference of the people which is due to the transactionary, precautionary and speculative motives. The speculative motive is the most important of these and very sensitive to changes in the rate of interest

5 The supply of loanable funds comes from the savings of the people plus the additions to money supply in a given period and the demand for loanable funds comes from the investors and those who want to hoard the funds. The combined curves of the two sides give us the rate of interest

6 Lerner attempts to say that the two theories are the same by pointing out that since savings equal investment we can eliminate this constant quantity from the total supply and demand schedules of the loanable funds and still get the same result i.e. the result that intersection of L and M curves would give

7 Hicks tries to resolve the dispute by making use of his general equilibrium analysis

8 But Hicks fails to bring out the role of the rate of interest in the whole mechanism of the economy

9 The loanable funds theory has the defect that since savings equal investment it is superfluous to include these in the demand and supply of loans. But if we exclude them and if in actual practice, demand for and supply of loans coincide with the savings and investment, where does the theory stand?

10 The liquidity preference theory has no such trap because here the savings are income elastic and not interest elastic and the interest is determined by liquidity preference and money supply, two of the four ultimate determinants (i.e., liquidity preference, money supply, marginal propensity to consume and marginal efficiency of capital)

SELECT READINGS

1 Patinkin D. Liquidity Preference and the Loanable Funds Stock and Flow Analysis, *Economica* 1958

2 Lerner A P. Alternative Formulation of the Theory of Interest *Economic Journal* 1938

3 Klein Keynes on Revolution

4 Hicks J R. Value and Capital

5 Somers Article in the Readings in Monetary Theory (A.F.A.)

Q 15 Do you agree with the view expressed by Dr Roosa that under modern conditions even small changes in official money rates can exert such a surprisingly strong influence on business conditions because of their effect not so much upon either borrowers or the savers of money but upon the lenders of money which has been already saved in the past ?
(Poona 1960)

In what manner do changes in the rate of interest react on the level of income in a community ?
(Punjab 1959)

Discuss the economic effects of a cheap money and easy credit policy for a country on (a) production, (b) employment and (c) foreign trade
(Agra 1958)

Ans. A cheap money policy (an increase in the quantity of money or a lowering of the rate of interest directly) affects the levels of real income, employment and foreign trade through the three Keynesian functions namely, the liquidity function the investment function and the consumption function¹

An increase in the quantity of money lowers the rate of interest, the liquidity function determines by how much the rate of interest w'd be lowered. The fall in the rate of interest through the investment function, leads to an increase in the scale of investment, given the marginal efficiency of capital. The increase in investment via the consumption function and multiplier brings about an increase in output or real income. Thus a cheap money policy has, 'other things remaining the same', a favourable effect upon production. But the phrase 'other things remaining the same' conceals a number of limitations of this policy which should be clearly borne in mind. The ultimate result of the action and interaction of the variables cannot be claimed to be so certain. In the first place it may not always be easy for the central bank to lower the rate of interest by a mere expansion in the quantity of money. The increase in the quantity of money may be offset by a corresponding increase in the liquidity preference as it may happen 'when a great feeling of uncertainty and the anticipation of price reductions increase the attractiveness of liquidity'.² Even if it were possible to lower the rate of interest initially, beyond a certain limit it would be almost impossible for the central bank to influence it. "After the rate of interest has fallen to a certain level, liquidity preference may become virtually absolute in the sense that almost everyone prefers cash to holding a debt which yields so low a rate of interest".³

Secondly, a fall in the rate of interest does not necessarily imply an increase in the level of investment. If the fall in the rate

1 Keynes—General Theory p 298

2 Kurihara—Introduction to Keynes on Dynamics p 1

3 Keynes—General Theory p 207

of interest is accompanied by a fall in the marginal efficiency of capital due to economic or political reasons, the level of investment may not increase. Similarly, how significant the influence of the fall in the rate of interest would be on investment depends upon what position the interest cost occupies in the total cost structure of the output. If the interest cost forms an insignificant part of the total cost, the increase in investment would be negligible or nil.

Thirdly, the efficacy of the cheap money policy in raising the level of real income depends upon the smooth operation of the multiplier process. The multiplier is based upon the assumptions (a) the presence of involuntary unemployment and the elastic supply of labour at the current money wage, (b) the existence of excess capacity in the capital equipment¹. If involuntary unemployment is absent or in other words, there is full employment in the Keynesian sense the labourers by definition would react to rise in prices by raising money wages. In such a situation, a cheap money policy would lead to a vicious wage price spiral without significantly increasing production. Similarly, if sufficient excess capacity in capital equipment is absent or if there are rigidities in supply of raw materials, a cheap money policy by raising the prices of the factors of production would generate a cost inflation. To put it in a different way, in such a situation an increase in the quantity of money would merely increase the money income without raising correspondingly the real income of the community².

What would be the impact of a fall in the rate of interest on the level of employment? The effect on employment depends upon the movement of investment as employment is functionally related to investment. If the marginal efficiency of capital is favourably affected and the supply of productive resources is sufficiently elastic employment would continue to increase until full employment has been reached. But there is a force which may pull employment in the reverse direction. If the fall in the rate of interest is very significant and is expected to continue for a sufficiently long time, the fall in the rate of interest and the consequent cheapening of capital may induce entrepreneurs to substitute the capital intensive technique of production in place of the labour intensive ones. This tendency will become especially prominent as the full employment is reached and the money wages start rising. How significant this substitution effect would be or would be operative at all of course depends upon how large interest cost is in the total cost of production.

¹ A K Dasgupta—Keynesian Economics and Underdeveloped Country in V B Singh (ed)—*A Symposium on Keynesian Economics*.

² V K R V Rao—Investment Income and the Multiplier in an Underdeveloped Economy in Agarwala and Singh (eds)—*Economics of Underdevelopment* p 216.

The cheap money policy affects the foreign trade of the country through its influence upon the price level. So long as there are unemployed labour and unutilised resources, the fall in the rate of interest would increase output and employment rather than prices. But as full employment tends to be reached prices would rise sharply on account of diminishing returns and the increased bargaining strength of the workers.¹

A rise in prices would have a two fold influence on foreign trade. In the first place, on account of the rise in the cost of production of the exports, the exports of the country would fall off. Secondly, the increased money incomes would raise the propensity to import and thus imports would increase. The net result would be an adverse balance of trade.

On the other hand, the fall in the rate of interest would discourage the inflow of foreign capital and the domestic capital would tend to flow out where it can obtain a relatively higher rate of interest.

POINTS TO REMEMBER

1. A cheap money policy affects the levels of real income, employment and foreign trade through the three independent functions namely, liquidity function, investment function and the consumption function.

2. A cheap money policy would increase production so long as there are unemployed labour and unutilised productive resources.

3. If investment reacts favourably to the cheap money policy, employment would increase until full employment is reached.

4. A cheap money policy by raising the export prices would generate an adverse balance of trade.

SELECT READINGS

1. Keynes, *General Theory*, Ch. XXI.

2. Dillard, *The Economics of J M Keynes*, Ch. VIII (pp. 182-189).

3. Somers, H M : Monetary Policy and the Theory of Interest in *Readings in the Theory of Income Distribution* (American Economic Association).

1. Keynes—General Theory, p. 301

Q 16 "Deficit financing can mobilise resources for economic development" Critically evaluate this statement.

(Suggested Question)

Ans. In the western countries the expression "deficit financing" is understood in the sense of the operation of meeting the excess of public expenditure over current revenue. But in India it has been the convention to use the term in the sense that the government meets its budget deficit through the sale of securities to the central bank or by drawing down its cash balances or by issuing fresh currency. This is the definition of deficit financing which was adopted by the Planning Commission in the First Five Year Plan. According to this definition the receipts from the sale of securities to the public are placed in the budget under "capital receipts" and are not shown as forming a part of the deficit. Thus genuine savings are clearly distinguished from the deficit. This special connotation attached to deficit financing in our country springs from an anxiety to separate that part of the deficit which impinges directly upon the aggregate money supply.¹

Deficit financing is a concept of comparatively recent origin. The Classical economists who believed in Say's Law of Markets ruled out the necessity of resorting to deficit financing for the promotion of income and employment. As the economic system according to them was self adjusting in character, given sufficient time and the free play of competitive forces, a situation of unemployment would automatically correct itself through fall in wages.

The crisis of 1930's, however, dealt a severe blow to the Classical optimism. There was an unprecedented slump in the level of economic activity and the phenomenon of involuntary unemployment assumed large dimensions in capitalist world.

J M Keynes came out with his *General Theory of Employment, Interest and Money* in which he advanced the thesis that unemployment of involuntary character is not due to wage rigidity but deficiency of effective demand. And in order to increase the level of effective demand, consumption or investment or both should be increased. This can be achieved effectively through the compensatory public expenditure and the creation of the budget deficit. An increment of deficit financing leads to a multiple increase in income through the multiplier process.

The Keynesian principle of deficit financing became immediately popular in America and England and even now deficit

¹ Dasgupta A K —Deficit Financing and Inflation, *Economic Weekly*, Annual 1957

spending is used in America and the European countries as a major instrument of policy in times of unemployment and depression

The use of deficit financing as an instrument of mobilising resources for economic development is of still more recent origin. The very fact that there is a large volume of surplus labour in the underdeveloped economy indicates the role of deficit financing in generating income and productive capacity. Almost all the underdeveloped countries of the world which have in recent times resorted to planning for economic development have been using deficit financing as an instrument of financing planned economic development.

The case for deficit financing as a device of financing economic development in the underdeveloped countries rests upon the weakness of the weapons of taxation and public borrowing.

The efficacy of the weapon of taxation in an underdeveloped economy is severely restricted on account of the existence of a vast non monetised sector. Secondly, as the standard of living of the majority of population is extremely low, the imposition of a heavy rate of taxation is undesirable for both economic and political reasons. Thirdly, a heavy tax system tends to discourage risk and enterprise so scarce and so essential for economic growth in the underdeveloped country.

The usefulness of the method of public borrowing is likewise limited on account of the low capacity to save. Whatever savings are made are mostly hoarded in the form of idle cash balances, gold, ornaments and jewellery.¹ The scope of borrowing is further narrowed down by the absence of a well organised money market which is essential for the success of a borrowing scheme. The deficit financing on the other hand immediately makes available to the government enough of resources which can be utilised for productive investment.

The instrument of deficit financing has, however, certain serious limitations in the underdeveloped economy and if carried on too far it can jeopardize the whole economic foundation.

The success of the weapon of deficit financing depends upon the smooth operation of the multiplier mechanism. The multiplier is based upon the fundamental assumptions that there is enough of excess capacity in the capital equipment and there is involuntary unemployment which implies the scope for a cut in wages.² But in

¹ United Nations—*Measures of Economic Development of the Underdeveloped Countries*, p. 37.

² Rao V. K. R. V.—*Investment Income and the Multiplier in the Underdeveloped Economy*, *Indian Economic Journal*, February 1952.

a typical underdeveloped country characterised as it is by scarcity of capital the excess capacity in capital equipment is limited if not non-existent. This means that when through deficit financing, the supply of money is increased it immediately becomes disposable income and generates demand for goods particularly consumption goods. But on account of the lack of excess capacity in capital equipment scarcity of tools and implements, output cannot be immediately increased. The increased demand thus outstrips supply and generates inflationary pressure. The absence of involuntary unemployment reinforces the inflationary pressure. The type of unemployment which is characteristic of the underdeveloped country is "disguised unemployment" and not involuntary unemployment. Under conditions of involuntary unemployment, the labourers being under a *money illusion* are prepared to accept a cut in real wages consequent upon a rise in the prices of consumption goods. But in the underdeveloped country the level of real wages even in the urban sector, not to talk of the rural sector, is about the minimum necessary for physical existence so that whenever the real wages fall on account of the rise in the prices of consumption goods the money wages tend to be raised through strikes, demonstrations etc. The rise in wages raises the industrial costs and thus a vicious spiral of inflation begins.

Some economists have, however, suggested in recent times the use of deficit financing for the deliberate generation of inflation. A mild degree of inflation can accelerate the pace of economic growth in the underdeveloped country by promoting capital formation. As the prices of consumable goods rise the wages and salaries tend to lag behind on account of the natural inertia of the 'contract incomes' to move in response to changing prices. The consequent fall in real wages increases profits which has a two fold effect on capital formation. In the first place the increase in profits has a stimulating effect upon the incentive to invest. Secondly, the share of profits increases relatively to that of wages and salaries which implies in effect a redistribution of income in favour of the class whose marginal propensity to save is higher than that of the wage and salary earning class.¹

A great importance has been given to deficit financing in the Indian Five Year Plans. During the First Five Year Plan the amount of deficit financing stipulated was of a modest order of Rs 290 crores. This was to be provided for by drawing upon the sterling balances. The actual amount of deficit financing however, exceeded the estimated amount. It amounted to Rs 148 crores during the first three years of the plan, to Rs 93 crores in the fourth year and to about Rs 180 crores in the last year of the first plan period. Thus the total amount of deficit financing during the

1 Poddar A K.—Inflation and Economic Growth, *A I C C Economic Review*, 6th March 1961

first plan period came to about Rs 420 crores and this calculated in terms of percentage of the total plan outlay of Rs 1,960 crores comes to about 20%. Although this amount of deficit financing was higher than the original plan estimate it did not have any adverse effect upon the economy. In fact, the general price level at the end of the plan period was lower by 13% as compared to 1950-51.

Encouraged by the favourable experience during the First Five Year Plan, the Planning Commission formulated the Second Five Year Plan under the optimistic impression that the Indian economy could absorb deficit financing of a much greater magnitude without reacting adversely upon the price level. Thus in the Second plan, more ambitious than the First, a conspicuously significant place was accorded to deficit financing. The second plan provided for deficit financing to the tune of Rs 1200 crores.

As soon as the first few doses of deficit financing were injected into the body economic the weaknesses of the economic system became apparent. This was reflected in the inflationary rise of prices. The index of wholesale prices which stood at 92.5 in 1955-56 (1949-1950) rose to 105.3 in 1957. In 1957-58 the index rose further to 108.4, indicating an increase of nearly 3%. The index for 1958-59 recorded a further rise of more than 4% and stood at 112.9. The cost of living index also shot up from 105 in 1956 to 111 in 1957 and 116 in 1958.

With prices at a high level at present and with the growing pressures for increases in wages and salaries to compensate for the rise in cost of living there is not much scope for further deficit financing. Hitherto, the inflationary effects of deficit financing have been partly neutralised by a drain on the sterling balances. The sterling balances in a way served as a cushion to absorb the inflationary pressures of deficit financing. These sterling balances have now been reduced to a negligible amount. The scope of financing the Third Five Year Plan by the mechanism of deficit financing is, therefore, very much limited.

POINTS TO REMEMBER

1. The term "deficit financing" implies in the plain sense of the term, the financing of the deficit budget through the creation of new money.

2. The case for deficit financing in an underdeveloped economy lies in that the tax revenue is relatively small and the scope for public borrowing is limited.

3. The theory of deficit financing has certain serious limitations in the underdeveloped economy. On account of the absence of excess capacity in the capital equipment and the shortage of skilled labour,

tools and implements, deficit financing leads to an increase in price level rather than an increase in output or real income.

4. During the First Plan period in spite of deficit financing there was no significant inflationary pressure due to (a) unusually good harvests, (b) reserves of sterling balances and (c) flow of adequate foreign capital

SELECT READINGS

1 Dasgupta, A K Deficit Financing and Inflation, *Economic Weekly*, Annual 1957

2 Rao V K R V Investment, Income and the Multiplier in an Underdeveloped Economy, *Indian Economic Review*, February 1952

3 Planning Commission *Second and Third Five Year Plans*

4 Gopal M H Inflation and the Five Year Plans *Commerce*, 6th January, 1961

Q 17. Discuss the technique, objectives and limitations of deficit financing (Karnatak 1960)

What is deficit financing ? Under what conditions, and to what extent, is it justifiable ? (Allahabad 1959)

Are you in favour of resorting to deficit financing to promote economic development in India ? What limit would you set to its size ? (Karnatak 1958)

Explain what is meant by deficit financing. In what circumstances would you justify deficit financing ? (Punjab 1957)

Under what circumstances and upto what extent is it justifiable for the State to indulge in deficit financing ?

Ans Deficit financing which was once looked upon with great horror by the orthodox school of economists has now made an entry into the discussions of the most respectable of learned circles. There are still some die hard believers in the virtue of a balanced budget who question the wisdom of resorting to deficit financing as a means to promote the economic development of the country, in spite of the fact that deficit financing has already been employed to finance some of the development schemes under our First and Second Five Year Plans. As against a planned provision of deficit financing in the First Plan of Rs 290 crores, the actual came to Rs 420 crores. By the end of the Second Plan, the extent of deficit financing was expected to be of the order of Rs 1175 crores. The Third Plan envisages deficit financing to the tune of Rs. 550 crores.

For purposes of application to our country, deficit financing is no longer a matter of mere theoretic or academic importance since the deductive reasoning in the realm of theory would have

stood the test of practical consequences which have already been brought into existence as a result of deficit financing during the First and the Second Plans. It is clear that the concept of deficit financing refers to expenditure over and above the receipts during a given period of time. Thus defined, deficit financing could be practised by the state as well as private persons who spend during a certain period more than the income of that period. The excess of revenues to mitigate extra expenditure could be found either by drawing upon the balances of the past, or by expansion of bank credit or by the creation of paper currency when the state desires to practise deficit financing. Deficit financing refers to the financing of programmes of expenditure out of created money. The choice of a particular method of deficit financing would have its own peculiar economic consequences and in the context of a developing backward economy the *modus operandi* of deficit financing would be as important as the magnitude of the deficit financing.

The issues that come up in the context of a developing backward economy are mainly three—(i) Is it desirable to resort to deficit financing in order to provide the most urgent sinews for growth? (ii) in case, it be regarded desirable what is the safe extent to which deficit financing could be carried? (iii) what are the helpful and the harmful consequences of deficit financing in a country like ours and what are the ways and means which would help us in employing deficit financing without its usual evil consequences?

It is a fact which hardly needs any emphasis that a developing backward economy is badly in need of funds to invest in a variety of fields on a large scale so as to initiate the process of the 'take off'. The investment has to be big enough to give a severe jolt to the economy out of the vicious circle of under-development. With extremely low *per capita* income, low capacity to save, the masses of people are practically incapable of providing anything but a fraction of the revenues required for purposes of development. For them the question of tightening the belts to release funds for investment does not arise at all, in view of the sub normal subsistence levels of living to which they have been condemned for centuries together. There are, of course, great inequalities of wealth and income in our country and the urban as well as the rural gentry do indulge in a considerable amount of unnecessary consumption which does not have any economic function to fulfil. To the extent that the state makes bold to inflict a curtailment of such consumption by measures of taxation and propagation of the ideals of austerity, more and more of resources would be released for purposes of investment and correspondingly the need for deficit financing would automatically diminish. A thrifty race of people habituated to a life of puritanic austerity or to a high propensity to save in the economic jargon,

would have more of resources of investment. In order to achieve a given speed of development, a given quantum of investment has to be undertaken within the time limitations and the limitation of real physical resources. The planners therefore, have to find the money from the blue, if necessary. The desirability or otherwise of deficit financing is to be judged keeping in view the urgency of economic development. If one could feel fairly certain that development could be effectively achieved with the help of deficit financing, one would feel inclined to approve of the maxim, that the end justifies the means, especially when the means thus employed are not expected to have any evil consequences of material importance. If enough of savings could be induced and mobilised through the normal channels such as taxation and borrowings, the need for deficit financing does not arise at all. Democratic governments do not have the necessary courage to inflict on the people unusually severe measures lest the party in power be dislodged out of authority. Since the facts are what they are we have to see the likely consequences of deficit financing and examine the possibilities of speeding up the growth of the economy, out of created money.

In a purely technical sense drawings upon the balances of the past and borrowings are termed a part of the scheme of deficit financing. If however, the problem be viewed primarily from the economic angle, we see that past balances and current debts are all likely to have created corresponding real savings—excepting those debts which are subscribed by the expansion of bank-credits. For economic purposes, deficit financing should comprise of created money only—created either by the banks which expand credit or by the government by printing of legal tender currency. Money that is thus brought into existence has to perform its normal function of pursuing commodities, unless it be hoarded partially, reducing the severity of the chase. When deficit financing is undertaken, it is obviously meant for financing certain schemes of development such as the sinking of wells, construction of roads, erection of buildings for schools, hospitals and offices, buying of machinery for the farm or factory within the country etc. In every case, we find that there is a time gap between the pumping in of money into the hands of the people and the fructification of the schemes of development. If the extra demand created out of created money be exactly matched by extra supply of the very goods which are demanded, there need be no fear of inflation. As it is, supply usually lags behind demand in such a situation in general terms as well as in terms of the adjustment of the demand for and the supply of specific commodities. Normally, therefore, the immediate result of deficit financing is a rise in prices, especially of those commodities which are purchased for development as well as those commodities which are purchased by the newly employed. The greater the time-lag, the greater the inflationary potential. Similarly, the greater the maladjustment of demand and supply of

specific commodities, the greater would be the rise in prices. For instance, deficit financing could be resorted to for financing the production of cement and the newly employed workers might demand more of food. In course of time, the increased production of cement would not solve the problem of food shortage. This sort of situation was sought to be countered in our country through the liberalisation of imports of consumer goods in the course of the first plan. Our sterling balances which made possible imports with ut exports of corresponding value, contributed a good deal to the reduction of the inflationary potential. In spite of this facility there did occur a rise in prices and inflation bids fair to continue unabated even to day. Ever since the commencement of first plan the rupee has gone down in value by about 30%. Apart from deficit financing, there are other causes as well, which have been responsible for the rise in prices. It is, therefore difficult to isolate the consequences of deficit financing alone because of the complexity of the situation. It is, however, fairly certain that deficit financing has been an important cause of the recent rise in prices.

Applied in a moderate way to specific selected schemes where the time lag between investment and fructification is the minimum, deficit financing can bring about development without the dangers of an inflationary potential. A proper imports and exports policy appropriate to the ensuring of maintaining essential goods prices on an even level, can also go a long way. The imposition of controls on certain commodities as a part of an integrated scheme of development would also ensure deficit financing within the limits of safety. What is the safe limit depends actually on how deficit financing is used and how it actually works in practice. In our country, it seems we have already crossed the limits of safe deficit financing, in view of the enormous rise in prices in recent times. It would be good to remember that deficit financing ought to be the medicine of the economy and not its daily bread.

POINTS TO REMEMBER

1 The problem of financing a deficit

2 Meaning of deficit financing—all expenditure of a period over and above the income of the period—expenditure of borrowings from private individuals and borrowings from the banks or by printing of notes. In the economic sense only created money that is spent during a period could be called deficit financing. This includes two things—(a) expansion of currency and (b) expansion of credit.

3 Likely results—time lag between investment and fructification of investments—rise in prices— inflation because of too much of currency—maladjustment of specific demand and specific supply

4. Counter acting measures :—

Import and export policy—selection of quick yielding schemes—imposition of essential controls etc

5. *Deficit financing should be the medicine and not the daily bread*

DEFICIT READINGS

- 1 Prest A R. *Public Finance, in Theory and Practice*, Ch V.
- 2 Bhargava, R N. *The Theory and Working of Union Finances in India*, Ch X (Allen and Unwin)
- 3 Groves, H M. *Financing Government*, Ch XXV.

Q. 18. Does deficit financing inevitably lead to inflation in a developing economy ? (Venkateswara 1960)

Discuss the technique, objectives and limitations of deficit financing (Karnatak 1960)

Examine the proposition that the government deficit gives a more or less accurate measure of the inflationary impact of fiscal operations (Bombay 1960)

Do you think deficit financing under the second five year plan has resulted in an inflationary situation in India ? Briefly outline a policy of financing economic development without inflation (Gujarat 1960)

“Deficit financing is inflationary”. How far is this borne out by recent experience in India ? (Madras 1959)

Discuss critically how far the methods of financing the last war were responsible for the post war rise in prices in India (Calcutta 1958)

Ans. Deficit financing alludes to the financing of governmental schemes of expenditure out of created money, because the size of expenditure for a given period is not fully covered by the total amount of revenue received. The government might draw upon the past savings or borrow from the central bank and in either case the excess of expenditure over receipts is called deficit financing. In times of emergency like a war or in the context of urgent development schemes which the government hopes to fulfil on a war footing, the public authorities might decide to use their currency powers to create legal tender for financing a plan of expenditure. This is to be termed deficit financing.

Deficit financing was largely resorted to finance the last war and is currently being employed in our country to finance the Five Year Plans. During the second World War, India was involved on behalf of Britain and the then British Government in India which

was financing war supplies, purchased on behalf of Britain and her allies. The question, however, was how to find the necessary resources to finance purchases on an enormously large scale. In fact, the payment was to be made by the Government of Britain and not of India. The British Government, however, was paying sterling to the credit of India in the Bank of England and that is how, there accumulated what is known as sterling balances. The Government of India issued currency on a large scale against the security of sterling balances and used this money for financing the requirements of the troops stationed in India. The value of notes in circulation in the year 1938-39 was Rs 182 crores and at the close of the war, i.e. in the year 1945-46 it shot up to Rs 1163 crores. Credit expansion for the same period rose from Rs 116 crores in 1938-39 to Rs 301 crores in 1945-46. During the period of the war prices kept on rising and between the beginning of the war and the close of the war the general index of prices rose by nearly 150% (Base 1939=100 1945-46=245).

Because of the concomitant variation in the volume and value of currency and credit and the general level of prices both in the same direction the rise in prices is ascribed to deficit financing, on a causal relationship between the two and it is held that deficit financing leads to the generation of inflationary pressures in the economy. It is true that a great part of the rise in prices is directly ascribable to the consequences of deficit financing—too much of money pursuing too few of goods bringing about a rise in the prices of commodities or a fall in the value of money. The war time rise in prices could not however, be said to have been caused solely due to deficit financing. There are other circumstances contingent to a war which might be responsible to a considerable extent for the rise in prices. Even when the volume and value of currency remains the same, there might be felt a relative scarcity of goods when demand rises because of the activation of idle resources. During a war period when there is a large scale diversion of men and material from civilian productive purposes to the prosecution of a war, there is a natural fall in supplies and demand rises much faster than the supplies—in fact, demand rising and supply falling, there is a strong tendency for the prices to rise because of forces operating on both the sides. War disrupts international trade and when foreign supplies of capital and consumption goods are cut off as during the second war, the tendency for the prices to rise is reinforced further. Even the supplies from indigenous industries could not be continued on the pre war basis because of a shortage of raw material and capital equipment. War gives rise to immense speculation and hoarding and disrupts the system of transportation in the country leading to a maldistribution of goods in space and time and hence, causing a steep rise in prices. The spirit of profiteering rules supreme and every manufacturer and trader looks forward to amassing a huge fortune out of the war, before it is too

late! There might be a crash and a debacle when the war comes to a close. Therefore, everyone must make hay while the sun shines. The government tried to hold the prices in check by imposing controls on the essential commodities. The market forces of demand and supply exploded the legal barriers, resulting in the coming into existence of thriving black markets.

We see, therefore, that the rise in prices in the post war years was due to deficit financing during the war, to a partial extent though this was by no means unimportant. The other causes were as important as deficit financing. The war time rise in prices was carried forward because of unsatisfied pent up demand during the war time and because of other post war developments which perpetuated the war generated tendencies, further.

The end of the war in August, 1945, did not bring about an end of inflationary conditions. Far from it, the general index of prices continued to rise. Taking the base year 1939 as 100, the general index stood at 275 in 1946 47, 308 in 1947 48, 376 in 1948 49, 410 in 1950 51 and reached the peak of 435 in 1951 52 because of the outbreak of the Korean war in June 1950. The Indian currency was devalued in 1949. The Korean war which induced stock piling in many countries played a very important role in bringing about a rise in prices in the post war years. With the end of the Korean war, relaxation of import controls and raising of the bank rate etc brought down the index from 462 in April 1951 to 397 in March 1952.

The post Korean war rise in prices in our country has not been of a serious order. On the whole the rise in prices between 1952 and 1955 was less than 5%. But because of the development investment of the first plan the general index again rose to 414 in the year 1956 57. A fall in production due to natural calamities, the economic consequences of partition and the growing adversity of the balance of trade, all combined in forcing a rise in prices because of a fall in indigenous supplies and the need for cutting down of imports. As against a planned deficit of Rs 290 crores during the First Five Year Plan the actual deficit had been of the order of Rs 420 crores. By the end of the Second Plan, the deficit in the government budget was expected to be of the order of Rs 140 crores. The expansion in the volume and value of currency and credit is continuing unabated and hence there should be nothing surprising if the prices continue to keep on rising.

Deficit financing for development purposes need not in fact be as inflationary as deficit financing to wage a war, particularly when deficit financing is employed to finance quick yielding schemes of development. What actually brings about a rise in prices is the running of demand much ahead of the supplies, because of the time lag between investment and the fructification of investment.

The tendencies for the prices to rise can be held effectively in check by reducing the gestation period. Financing the development of small handicrafts and consumer goods industries or financing the development of agriculture by way of distribution of better seeds, implements and fertilisers or small irrigation works etc would in all probability, not add to the inflationary pressures. In cases such as these the supply of commodities is likely to follow close on the heels of the creation of demand because of more of money in the hands of the people. There is however the possibility of a discrepancy between the type of demand and the type of supplies resulting in the rise of prices of particular commodities.

On the basis of the experience of many economies, wisdom would demand in applying methods of deficit financing with all caution and within certain limitations as required by the specific circumstances of a given economy. Deficit financing would be justified only under unavoidable circumstances and only when the advantages to be derived from deficit financing far outweigh the disadvantages. During a period of war, for instance, deficit financing becomes inevitable due to the exigencies of a national calamity and therefore, despite the serious disturbances caused to the economy by too much of money the nation has to suffer deficit financing. Deficit financing has to be justified from the angle of the maximum social advantage. It is now recognised that the use of deficit financing as an instrument to promote the economic development of a country is far more justified than the financing of a war because the anti-social consequences of deficit financing can be undone in a short time, when the fruits of development start flowing in the market. Moreover, controlled deficit financing could be applied only to selected schemes which are expected to fructify within the shortest possible time. A vigilant government can so control the imports and exports, the supply of basic commodities in the internal markets, the prices of wage goods etc, as to minimise the anti-social consequences of deficit financing. It is, however, only a medicine and not the daily bread.

POINTS TO REMEMBER

- 1 *Definition of deficit financing—usually it refers to the financing of excess of expenditure over current receipts of the government through created money*
- 2 *Credit expansion to finance is also partly deficit financing in the private sector*
- 3 *The exigencies of a war and the need for revenues—accumulation of sterling balances and the expansion of Indian currency on that basis*
- 4 *The variations in the general index of prices during the war.*

5 *Deficit financing and other war time circumstances, responsible for a rise in prices*

6 *The post war rise in prices—pent up demand, partition of the country, the Korean war, natural calamities etc*

7 *Deficit financing during the first and second plans*

8 *Conclusion*

Selected and limited deficit financing alone is advisable

SELECT READINGS

1 Bhargava R N *The Theory and Working of Union Finance in India* Ch X (Allen and Unwin)

2 Lakdawala, D T *Taxation and the Plan* Ch I

Q 19 Compare the problems of Developmental Finance with those of War Finance. How far is it possible to use the methods of raising large sums for fighting a war to finance economic development ?
(Bombay 1957)

Ans It is often said that economic development which necessitates mobilisation and investment of enormous sums is a phenomenon which well stands in comparison with the feverish preparation for a war and the lightning quickness with which executive decisions are made by the generals in charge of fighting the enemies. For our purposes the point at issue is a comparison between the ways and means of financing a war and the methods of financing large scale economic development. It is clear *per se* that both the situations make a heavy demand on men and resources on a scale unprecedented excepting in a comparable situation in the past. There has to be a deflection of labour and capital from their normal employment to satisfy civilian needs to the construction of war material in the case of a war and to the fulfilment of development targets when a country is planning for large scale economic development. Short of conscription and commandeering of resources the state has to pay the ruling market price for all the purchases of labour and equipment. There is consequently an enormous increase in the budgets of the government. The first point of comparison between war finance and development finance is the enormous increase in the expenditure of the community as a whole be it on the governmental account or on private account. War is solely a responsibility of the state and hence the increase in expenditure characterising the preparation for and the execution of a war is almost wholly on governmental account excepting for the multiplier effect arising out of additional employment and incomes. Development expenditure need not, however, be solely on the governmental account. Far from it, a major part of expenditure for development is likely to be in the private sector under a democratic plan of development. Presuming that the government is required to initiate and sustain the process of economic develop-

ment almost entirely on its own account because of the lack of adequate private enterprise, the comparison between war finance and development finance would come closer still. Where the state is wholly or mainly responsible either for a war or for development, the question that naturally comes to our mind is why should the same agency be not equally good or bad for a given purpose? If the government can successfully finance the measures for a war, why not the measures for economic development? The relevant questions that come to our mind in this connection are what are the normal means and methods of financing a war and to what extent are these methods plausible of employment for financing the schemes of economic development? If the two situations be totally identical, every conceivable measure of financing a war could be used for financing the schemes of development. In case, the two situations differ in regard to certain aspects, there would be a difference in the means and methods of financing.

It is a fact well known that war imposes additional burdens of taxation on the belligerent countries and their allies. The burden of taxation is not only pushed to the limits of taxable capacity but sometimes, people are forced to cut down their normal consumption in order to release resources for financing the war. It can be argued by analogy, that the same measures could be resorted to, even for purposes of financing development planning. Resources have to be released from consumption in favour of investment. There is actually no reason why people should not be prepared to bear the burden of extra taxes in order to provide the "means for development". In fact, the same compulsion could be applied as in a war. There is likely, however, to be a basic difference in the approach to a war as distinguished from the approach to the process of economic development. The heat tension and excitement generated by a war along with the patriotic fervour when the country's honour is at stake would generate a passionate sense of responsibility in every individual citizen and rouse him to sacrifice everything including his life in order to win the war. We could expect, therefore, a great readiness on the part of the community to accept voluntarily the burden of additional taxation to pay for the war. If the same passions could be roused about economic development, people perhaps, would not mind bearing additional burden of taxation. It is doubtful, however, whether a war psychosis could be roused about schemes of development, especially in the conditions of an under developed country where people are used to poverty for ages together and hence do not react to the schemes of development with the expected fermentation of feelings. Additional taxes may in fact provoke reactions unhelpful to development¹. We see, therefore, that the comparison between

1. The reaction of the peasants of Punjab to betterment levy is an instance in point. In spite of their receipt of a definite benefit by way of water

war finance and development finance is useful within certain limitations. Whereas a war is expected to continue for a short period and hence, the whole community is prepared psychologically for all possible exigencies, economic development is likely to be a prolonged affair spread over decades. One can have a full sight of the warmth of victory in a war but the fruits of development may not accrue immediately to the community as a whole. Development by its very nature starts in strategic sectors and then gradually spreads to the economy in various corners. The first to benefit by development are those who find additional employment and new markets and this would be only a small part of the whole community. The preparedness to bear the burden of extra taxes is hence not likely to be universal, with the myopic vision of men in general.

Governments resort to borrowing both from within and without in order to finance a war. Borrowing is unavoidable even for financing schemes of development. Governments do float loans both in the country and abroad in order to raise resources for development. A programme of borrowing for financing development is likely to be more successful than a programme for financing a war. It is realised war loans are a deadweight on the community and a war devastated economy with its totally broken machinery of production might not be able to provide to the government the necessary means for repayment of debts and interest thereon. Unscrupulous debtors might even repudiate war loans and some theoreticians might put the seal of approval on the repudiation of war debts. Debts which are contracted in order to finance schemes of development do not stand in any jeopardy of the sort. Debts create assets which yield a regular income, out of the proceeds of which payment of interest and repayment of principal could easily be made. Raising debt resources for financing schemes of development appears to be easier than for financing a war, unless passion about a war works the contrary miracle. The government may have some hesitations in raising money by loans to finance a war in view of the burden of repayment, but no such apprehensions need be there in the case of a plan of economic development. The loans pay their own way, if they be properly utilised for productive purposes. There is likely to be greater readiness on the part of external agencies to provide loans for financing schemes of development rather than financing a war. This, however, would be falsified in the case of rival political ideologies, the allies of which are likely to receive all possible aid including large scale gifts, because of political reasons. On purely economic considerations, war debts should be unpopular whereas development loans ought to be popular.

for irrigation the peasants do not desire to bear the cost. Who is to bear the burden of financing schemes of development, if the actual beneficiaries refuse to bear additional taxes?

The next comparison between war finance and developmental finance is the recourse to deficit financing in either of the cases. It is now a matter of common understanding that governments do add to currency circulation out of created money in order to finance a war. For financing selected schemes of development which would fructify within the shortest time deficit financing is advocated. Deficit financing to pay for a war is bound to generate high inflationary pressures which cannot be counteracted by increased supply of commodities, but for purposes of development it is possible to devise countervailing 'safety valves' in order to reduce the severity of too much of money pursuing too little of goods and services. Deficit financing for development is much safer than deficit financing for a war.

With all comparisons it seems destruction finance is basically different from construction finance. A comparison between the two is instructive but also brings to light the fact that development finance should be easier if reason prevails over emotions. Unfortunately passions and emotions rule supreme during a war but recede to the background when one thinks of economic development. How fine would it be if development could rouse the same feelings as a war!

POINTS TO REMEMBER

- 1 Both war and development necessitate large scale expenditure
- 2 War is solely a responsibility of the government whereas development is a responsibility of the people as a whole
- 3 Where development proceeds on a centrally planned basis, there is no difference between the two
- 4 How do governments raise their resources to finance a war and how far can we employ the same measures to finance development?
- 5 The burden of additional taxation, loans, deficit financing
- 6 Destruction finance and construction finance

SELECT READINGS

- 1 Keynes, J. M. *How to Pay for the War*
- 2 Lewis, W. A. *Theory of Economic Growth*
- 3 Agarwala & Singh *Economics of Under development*

Q. 20 Show how and to what extent monetary policy can be used to promote economic development (Allahabad 1960)

Critically examine the role and limitations of monetary policy in a developing underdeveloped economy
 (Suggested Question)

Ans The term "underdeveloped" country refers to a backward or poor country with a low level of *per capita* real income "under-equipped with capital in relation to its population and natural resources."¹

Although the chronic backwardness of an underdeveloped country cannot be traced to any single factor, it is recognised at all hands that by far the most important factor holding up the pace of economic development in the underdeveloped country is the low rate of capital formation. The rate of capital formation in the underdeveloped countries like India, Ceylon, Malaya, Thailand, Indonesia etc, varies from 3 6% of the national income as compared to 15 18% in the advanced industrial countries like the U.K., U.S.A etc.² The meaning of capital formation is that "society does not apply whole of its current productive activity to the needs and desires of immediate consumption, but directs a part of it to the making of capital goods."³ In a sense, the rate of capital formation is the same as what is meant by the rate of investment. If the low rate of capital formation is the cause of underdevelopment, it logically follows that the remedy for poverty is to step up the rate of capital formation for which it is essential that savings should be increased. The scope of monetary policy in the planned economic development of the underdeveloped country has to be judged in this broad perspective. To the extent monetary policy is capable of influencing savings and investment, it can contribute to economic development.

It should be noted at the very outset that the scope of monetary policy is extremely limited on account of certain structural characteristics of the underdeveloped country. In the first place, there is a vast non monetised sector where the changes in the quantity of money or rate of interest do not have any influence upon the nature and level of economic activity. Secondly, the proportion of credit to money in the monetised sector is very low. Nearly 70% of money in circulation is currency and only 25 30% is credit. This seriously limits the role of monetary policy. Thirdly, the monetary policy presupposes the existence of a "developed" money market which is conspicuous by its absence in the underdeveloped country. In the underdeveloped country we usually come across "undeveloped" money markets.

¹ Nurkse—*Problems of Capital Formation in Underdeveloped Countries*, p 1

² Meir and Baldwin—*Economic Development*, p 304

³ Nurkse—*Op. cit.*, p 2

By the "undeveloped" money market, we mean the market having the following characteristics ¹

1 The undeveloped money market lacks a highly organised banking system

2 It is not composed of specialised sub markets like bill market, bond market, call loans market etc

3 The extent of integration between the different sub markets is comparatively small. There are sub markets which often occupy important positions, but which are not connected with or influenced by the banking system. The sub markets cannot, therefore, be effectively controlled by the banking policy. For example, the Indian money market consists of two parts namely, the "indigenous" and the "advanced" and the two have not been properly co-ordinated

4 On account of various types of rigidities and bottlenecks which hamper the mobility of capital funds an undeveloped money market is rather insensitive to the impact of international influences

On account of these factors the efficiency of monetary policy is extremely limited in the underdeveloped country. But this is not to deny the significance of an active monetary policy in the planned economic development

The massive problem of economic backwardness in the underdeveloped country cannot possibly be tackled by mere monetary manipulation for the economic development is held up by the real factors rather than by the monetary factors ². But monetary policy can be a considerable support to a policy of planned economic development "by influencing the supply and uses of credit, combating inflation, and maintaining balance of payments equilibrium" ³. In the first place, there is utter need in a developing underdeveloped economy of extending the sphere of the monetised sector. This can be done by the establishment and extension of banking and financial institutions. Secondly, as the private capital is extremely shy in the initial stages of economic development, the maintenance of cheap money policy is essential for encouraging private investment. Thirdly, economic development is inevitably accompanied by a certain degree of inflation which may jeopardize the whole economy unless controlled by suitable monetary policy. Lastly, economic development also imposes strains upon the balance of payments of the country which can also be managed to some extent by appropriate monetary policy. Thus although the efficacy of monetary

1 Sen S N - *Central Banking in Underdeveloped Money Markets*, Ch 1

2 N C Ray - *Role of Monetary Policy in Underdeveloped Countries Economic Affairs* 1960

3 Meir and Baldwin - *Op. cit.*, p 331

policy is restricted on account of the existence of the undeveloped money market, still monetary policy has an active role to play in a scheme of planned economic development

Now the question arises, what should be the goal or goals of monetary policy?

The traditional goals of monetary policy are the stability of exchange rates and the stability of prices. The exchange stability as a goal of monetary policy was associated with the Gold Standard. But after the breakdown of the Gold Standard price stability took the place of exchange stability. Stabilisation of the general price level was regarded as the supreme objective of monetary policy during the Great Depression of the 1930's. But neither exchange stability nor price stability appears to be an appropriate goal of monetary policy in an underdeveloped country.

As most of the countries of the world are members of the I.M.F., the fluctuating exchange rates do not pose any serious problem. The exchange stability can be taken for granted under the I.M.F. arrangements. The goal of price stability appears to be more appropriate for a developed country where the fundamental problem is economic stabilisation. In an underdeveloped economy where the basic problem is economic growth, a slowly rising price level would be more suitable as it would have a favorable impact upon the private incentives to invest. It has also been suggested by some economists that a mild inflation by compulsorily cutting down consumption creates 'forced savings' which can be utilised for purposes of investment.¹

The stability of interest rates also does not appeal as an appropriate goal of monetary policy for an underdeveloped economy. In fact, some have made out a case for maintaining a high rate of interest in a developing economy.² A high rate of interest would, it is argued, restrict the allocation of scarce capital only among the most productive sectors and thus eliminate the wasteful use of scarce resources. It would also serve as an effective anti-inflationary measure by restricting undesirable investment and stimulating saving. The case for high interest rate policy, however, does not bear close scrutiny.³ It is true that a high rate of interest may succeed in controlling inflation through its restrictive effect on all forms of investment. But it is hardly desirable for an underdeveloped country aiming at a rapid growth to resort to a general restriction on investment for checking inflation. A more effective method of controlling investment in undesirable directions would be to resort to direct controls and control over capital issues. So far

1 Bernstein and Patel—*Inflation in Relation to Economic Development* I.M.F. Staff Papers, Oct 1953

2 Ray N C—*Op cit* p 164

3 Podder A K—*Monetary Policy in a Developing Economy*, *Yojana* 26th June 1970

as the weapons of monetary policy are concerned the 'selections or qualitative methods of credit control are much better suited to the underdeveloped countries than the rate of interest. They can be devised suitably to ensure a reasonable control over investment without producing any adverse effects on investment in desirable channels. Similarly the argument regarding saving can be summarily disposed of. Savings depend upon the capacity to save and the facilities for saving rather than upon the rate of interest and accordingly specialised financial institutions should be set up for mobilising the savings. The only case that may be conceded to the high rate of interest policy relates to its employment as a shock tactic. When speculation in goods and securities becomes ripe and gets beyond control by other means the rate of interest may be employed for pricking the bubble.¹

Thus a high rate of interest cannot be a general goal of monetary policy. On the contrary there is a sound case for maintaining a low rate of interest which has a stimulating effect upon employment and income through increased investment.

The optimum employment or in other words full employment is the most appropriate goal of monetary policy for an underdeveloped country. Since increasing employment is associated with the rising income and capital formation this objective does not require any explanation. The underdeveloped country is characterised by a large volume of disguised unemployment.² The volume of disguised unemployment constitutes in some countries 40-50% of the total labour force in agriculture.³ The pressure of this large surplus population on land seriously affects the agricultural productivity and thereby holds up development of other sectors. Under such circumstances the provision of gainful employment to the surplus hands becomes a policy of crucial importance. What is more significant to note is the disguised unemployed instead of becoming a liability are as Prof. Nurkse contends a source of capital formation.⁴ Thus stepping up of the level of employment is a highly desirable goal of monetary policy. But it ought to be noted that the level of employment cannot be directly influenced by the monetary policy. The monetary policy can influence the level of employment only indirectly through savings and investment.

POINTS TO REMEMBER

1. The scope of monetary policy is rather limited in an underdeveloped country on account of (a) the existence of a vast non-market

1. Ray, 'C-Op. c.t. p. 166

2. Nurkse—Op. c.t. pp. 3-33

3. Ib. d. 1. 3

4. Ib. d. pp. 3-39

ed sector, (b) the low proportion of credit to money and (c) the undeveloped nature of the money market

2 But in spite of these limitations, an active monetary policy is essential for the smooth functioning of a developing underdeveloped economy. An active monetary policy is useful for (i) the extension of the sphere of the monetised sector, (ii) encouraging private investment, (iii) fighting inflationary pressure and (iv) correcting disequilibrium in the balance of payments

3 As regards the goal of monetary policy, exchange stability is guaranteed by the monetary arrangements under the I M F. The goal of price stability is more appropriate for the advanced industrial countries, a mild inflationary policy would be more conducive to economic growth. The optimum or full employment is the most desirable goal of monetary policy for an underdeveloped country but the influence of monetary policy on employment is only indirect

SELECT READINGS

1 Meir and Baldwin *Economic Development* pp 391-39,

2 Ray, N C *Role of Monetary Policy in Underdeveloped Countries*
Economic Affairs, April 1960

Q 21. Examine critically the purchasing power parity theory of foreign exchange. How does it differ from the classical theory of foreign exchange ? (Agra 1961)

Explain the purchasing power parity theory of foreign exchange. Is it a better guide in the fixation of the rate of exchange than the gold standard ? (Agra 1959)

Critically examine the purchasing power parity theory

(Rajasthan 1959)

Examine critically the purchasing power parity theory and give its limitations. Is it an improvement on the classical theory of foreign exchange ? (Agra 1958)

Ans International trade in contradistinction with internal trade has to reckon with a diversity of national currencies and one of the most important problems that usually comes up is how to determine the rate of exchange as between different currencies. This problem of determination of exchange rates has been examined by several thinkers right from the days of Ricardo and Mill whose names are associated with the classical theory of the rate of exchange down to the modern theory as propounded by Taussig, Haberler and Bertil Ohlin. The purchasing power parity theory is one of the theories that are most widely accepted in the realm of the discussion about the determination of exchange rates. The purchasing power parity theory states in substance that the exchange ratio of two

currencies depends on their respective purchasing power unit for unit in terms of a representative set of commodities in the two countries. Temporarily, there can be a deviation from the purchasing power parity due to a pressure of the passing market forces but in the long run two countries can continue to have trading relations only if the exchange rate approximates to the respective purchasing power of the currencies. One of the best definitions given is "while the value of the unit of one currency in terms of another currency is determined, at any particular time by the market conditions of demand and supply, in the long run that value is determined by the relative values of the two currencies as indicated by their relative purchasing power over goods and services. In other words, the rate of exchange tends to rest at that point which expresses equality between the respective purchasing powers of two currencies. This point is called the purchasing power parity."¹

We can illustrate the point with reference to some example in which two countries pay two different sums of their currency for a given group of commodities of the same quantity and quality. Let these two countries be India and Pakistan and let us suppose further that a given group of commodities C_1 from India is equivalent to C_2 from Pakistan and further, let,

$$\begin{aligned} C_1 &= \text{Rs. 100} \\ \text{and } C_2 &= \text{Rs. 150} \\ \text{Now, } C_1 &= C_2 \end{aligned}$$

$$\text{Rs. 100 (of India)} = \text{Rs. 150 (of Pakistan)}$$

Therefore the exchange ratio between the two countries would be

$$\text{Rs. 10 of India} = \text{Rs. 150 of Pakistan}$$

Should the actual market rate of exchange be either above or below the purchasing power parity, certain economic forces would come into operation which would push or pull the exchange rate down or up to the point of purchasing power parity. Let us presume for a moment that the actual exchange rate as between India and Pakistan at any given point of time stands at

$$\text{Rs. 150 of India} = \text{Rs. 150 of Pakistan}$$

[when according to parity of purchasing power

$$\begin{aligned} \text{Rs. 10 (of India)} \\ = \text{Rs. 150 (of Pakistan)} \end{aligned}$$

Here is a case in which India's currency is under-valued and Pakistan's currency is over-valued. Pakistanis have to pay more in their

own country Rs 150/- for C_2 of commodities. Instead, it is far more profitable for them to pay Rs 100/- of Pakistan to get Rs 100/- of India and buy the same set of commodities for Rs 100/- only (presuming that free trading is permissible). Ignoring cost of transportation Pakistanis can have a net saving of Rs 50/- for every group of commodities which in their country costs Rs 150/. The result will be that the demand for Indian goods in Pakistan would keep on rising.

The reverse would happen so far as India is concerned. Pakistani currency is over valued. C_1 of commodities costing only Rs 100/- in India would cost Rs 150/- in Pakistan. Pakistani goods become extremely costly in India. The demand for imports from Pakistan must decline.

The demand for Indian goods in Pakistan is rising whereas the demand for Pakistani goods in India is falling. The demand for India's currency would tend to raise the value of the Indian rupee whereas the fall in demand for the Pakistani currency is rising and the demand for Pakistan currency is falling. The rise in demand for India's currency would tend to depress the value of the Pakistani rupee. Both of them, thus tend to move towards the point of purchasing power parity which in our example stands at Rs 100/- of India being equivalent to Rs 150/- of Pakistan. The theory holds that the exchange rates as between two currencies of any two countries of the world must in the long run approximate closely to their respective purchasing power, in spite of short term deviations, occasioned by the temporary market forces.

Something analogous to the purchasing power parity happened under the gold standard system of currencies. If a particular country experienced a shortage of gold and hence a fall in prices due to insufficiency of the quantity of money in circulation, there would be a natural tendency towards a restoration of the purchasing power of the currency concerned back to the former level. A fall in the prices of the country in question would obviously stimulate its exports and the relative over valuation of other currencies would discourage imports. In course of time the country would have a favourable balance of trade—an excess of exports over imports. Under the rules of the gold standard the excess is paid for in terms of gold. The country with a favourable balance of trade would come to import gold in return for the excess of exports of commodities. The quantity of gold in possession would thus increase and hence the prices would tend to rise again because of the increase in the quantity of money. Thus the exchange ratio as between two currencies would tend to be equal to the purchasing power of gold in the respective countries. This was achieved by the free movement of commodities as well as gold from country to country.

With the abandonment of the gold standard and adoption of inconvertible paper currencies the situation underwent a radical

change and a new theory had to be formulated in order to understand the rationale behind the fixation of exchange rates between different currencies of the world. The purchasing power parity theory can fit into every possible situation and explain the fixation of the exchange rate at a particular level whether the countries are on the gold standard, silver standard or some form or the other of the paper standard. It brings the value of the currency of a country in terms of the value of some other currency in line with the general theory of pricing and marks a distinct improvement over the classical theory which offered an explanation regarding the fixation of exchange rates on the basis of the labour theory of value. The classical theory endeavoured to examine exchange ratios on the basis of the comparative cost principle taking into consideration only two commodities and two countries at a time and assuming that labour is only component of cost to be considered. It also assumed constant returns to scale in the production of the commodities concerned. It ignored the fact that there is in point of fact a large number of countries with a large variety of commodities and several types of currency systems—countries with different types of factor endowments and at different stages of economic development. The purchasing power parity theory is thus a certain and distinct improvement over the comparative cost principle that was formulated by the classical theorists.

POINTS TO REMEMBER

- 1 *International trade has to deal with a diversity of national currencies*
- 2 *The problem of fixation of exchange rates has been examined right from the days of Ricardo and Mill down to the present time*
- 3 *The purchasing power parity theory is the most widely accepted of the theories*
- 4 *The theory states that the exchange ratio between any two countries depends on their respective purchasing power*
- 5 *Deviations from the point of parity are temporary. There are inherent forces in the economy which tend to bring the ratio back to the point of parity*
- 6 *Under the rules of the gold standard something analogous to the purchasing power parity prevailed*
- 7 *The purchasing power parity theory can fit into all situations*
- 8 *It marks a distinct improvement over the classical theory*

SELECT READINGS

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Halm *Monetary Theory*
 Crowther *Outline of Money*
 3 Thomas, S E *Elements of Economics*
 4 Haberler *International Trade*

Q 22 How far is it correct to hold that I.M.F. arrangements have proved superior to those under the International Gold Standard ? (Bombay 1960)

How far has IMF helped the establishment of a multi-lateral system of payments in respect of current transactions and the elimination of foreign exchange restrictions ? (Poona 1960)

In what ways has the International Monetary Fund helped to stabilise foreign exchanges ? To what extent has India been affected by the policies and operations of the Fund ? (Poona 1960)

Describe the methods by which the International Monetary Fund helps to maintain international payments equilibrium and estimate their success (Venkateswara 1960)

From the working of the International Monetary Fund, show how far it has succeeded in fulfilling the purposes for which it was meant (Nagpur 1960)

Explain briefly the objectives and functions of the International Monetary Fund. Give your critical appraisal of its achievements. (Agra 1960)

Explain briefly the objectives and functions of the International Monetary Fund. Point out the benefits which India has derived by its membership (Agra 1960)

Show how the International Monetary Fund helps in maintaining the stability of the exchange value of the rupee. In what way is the achievement of the I.M.F. different from that of the Gold Exchange Standard ? (Allahabad 1960)

Describe the main functions of the International Monetary Fund and say how far its membership has been beneficial to India. (Poona 1959)

Ans Conceived as a measure to foster international cooperation and build up a liberal world economy, the International Monetary Fund was established in 1944 with the following basic objectives

(a) To promote international monetary co-operation by providing a permanent machinery for consultation and collaboration on international monetary and commercial problems

(b) To facilitate the expansion and balanced growth of international trade and to contribute thereby to the promotion and maintenance of high levels of income and employment

In order to achieve these fundamental goals it was laid down in the charter of the Fund that it should try to (a) evolve a system of multilateral trade and payments, (b) maintain exchange stability, (c) provide resources to the member countries in order to enable them to tide over maladjustments in the balance of payments which inevitably arise in the process of economic development

At present there are nearly 70 members of the Fund. Under the Articles of Agreement of the International Bank for Reconstruction and Development, the Fund membership is a prerequisite to secure the membership of the Bank.

The par value of every member country is expressed in gold of the same fineness and content as the American dollar. This, it is important to note, does not imply the reintroduction of the gold standard. This arrangement has been made for the purpose of accounting and easy convertibility, not for maintaining stable exchange rates under the gold standard.

The Fund provides a fair degree of latitude for necessary adjustments in the exchange rates. A country has been empowered to change the par value of its currency to the extent of 10% of the initial par value without the permission of the Fund. It can change the par value by more than 10% with the Fund's prior approval.

In order to ensure the avoidance of any possible misuse of the above right, it has been laid down that the right can be exercised only if there is a "fundamental disequilibrium" in the sense that there is a chronic deficit in the balance of payments which cannot be corrected by the use of domestic monetary and fiscal policy.

The IMF maintains a 'fund' to help the member countries with financial assistance in times of need. The fund consists of a common pool of gold and currencies of the member countries. Each member is required to pay a quota which is fixed separately for each one on the basis of its national income, population and the volume of foreign trade. Of the aggregate quota, 25% has to be subscribed in gold and the rest in terms of local currency. The size of the quota determines the relative importance of each country in matters of policy. It determines the amount of foreign exchange which the member country can borrow and also the voting power. The quotas range upto \$2750 m for the U.S.A., \$1300 m for the U.K. and \$400 m for India.

The Fund lends resources to the members which require foreign exchange in order to fight temporary deficits in the balance of payments. It also provides funds to the underdeveloped countries for financing schemes of economic development. In order to ensure that the resources are not unnecessarily borrowed from the Fund and are utilised rationally, it has been provided that a country

can borrow in 12 months to the maximum of 25% of its quota. Interest is also fixed according to the amount borrowed and the length of time. In short, there is a powerful pressure on the debtor country to use the resources of the Fund only to the minimum and for the shortest duration.

An important provision in the Articles of Agreement of the Fund is the scarce currency clause. This clause relates to the situation when the currency of a member country becomes scarce. If the currency of a country becomes scarce it means that that country is having favourable balance of payments with other countries. This gives rise to great difficulties for the debtor countries who find it difficult to secure the currency of the country in question and pay back.

The 'scarce currency clause' provides that if the currency of a country becomes scarce the Fund should in the first instance propose to the country whose currency has become scarce to lend its currency to the Fund. Secondly, the Fund may ask the country to sell its currency to it for gold. If the country does not agree either to lend or to sell its currency the Fund may make a formal declaration that the currency has become scarce. This type of official declaration by the Fund empowers the member countries to safeguard their interests by imposing trade and exchange restrictions against the scarce currency country.

In order to maintain orderly exchange rates and promote exchange stability the Fund has prohibited the following principal types of exchange control.

1 Exchange restrictions on all current transactions

2 Multiple or discriminatory currency practices and competitive exchange depreciation

3 Freezing of foreign balances transfer moratoria etc

In order to ensure that these restrictions do not unduly bind the hands of the member countries certain exceptional cases have been provided. First the Fund permits exchange control necessary to regulate the speculative short term capital movements. Secondly the member countries have been authorised to discriminate against the country whose currency has been declared as 'scarce'.

The International Monetary Fund marks a considerable improvement over the Gold Standard system. The basic shortcoming of the Gold Standard is that it often creates a conflict between the domestic monetary policy with the external monetary policy. Under the Gold Standard the exchange rates are rigidly tied to fixed and unalterable quantities of gold (called the 'par values' of the currency). If a country faces the problem of inflow of gold into the country it must allow an inflation to bring about equilibrium. Similarly, if a country

faces a deficit in the balance of payments and the outflow of gold it must allow the prices and incomes to get deflated. The maintenance of equilibrium under the Gold Standard thus requires no inflation or deflation. Thus the domestic monetary policy is tied to the apron strings of the external monetary discipline. If a country happens to face the problem of deficits in the balance of payments in a period of unemployment it gives rise to a paradoxical situation. In order to restore external equilibrium it must allow the prices and incomes to deflate in order to increase employment on the other hand, it requires an inflationary policy. Thus the attempt to stick to a fixed exchange rate imposes a formidable burden on the domestic economy.

Under the I M F on the other hand the country is spared the necessity of inflating or deflating its currency and thus of subjecting the economy to a painful process of adjustment. Under the I M F the exchange rate of the currency of a country is not rigidly fixed. It can be adjusted according to the requirements of time and circumstances. The country cannot however change the exchange rate according to its whims and caprices. Neither can the country resort to unlimited exchange control. During the thirties after the breakdown of the Gold Standard the countries of the world went back to the Paper Standard. Under the Paper Standard the convertibility of the currencies was rendered difficult. Further the frequent changes made by the countries in the exchange rates and the adoption of exchange control created a medley of chaos and confusion in the sphere of foreign trade. Thus on the one hand, the I M F preserves the advantages of the Paper Standard and removes the disadvantages of the Gold Standard by introducing some degree of flexibility in the exchange rates. On the other by restricting the right of the country to change the exchange rate to a defined limit by prohibiting exchange control and by facilitating convertibility of the currency through gold the I M F has avoided the disadvantages of the Paper Standard and preserved the advantages of the Gold Standard. That is why it has been said that 'The I M F is an attempt to combine some of the virtues of the Gold Standard and of the system of the thirties while avoiding some of the disadvantages of both.'

How far has the I M F been able to achieve the goals for which it was established?

The I M F is an institution of comparatively recent origin and therefore it is too early yet to pass any judgment on the success or otherwise of this organisation. But from a study of trends and tendencies in the functioning of the Fund during the last one decade and a half one can clearly see that the Fund has failed to achieve some of the basic avowed objectives.

Although it has been largely successful in evolving a system

of multilateral payments it has failed to attain the all important goal of exchange stability. At the time of the inception of the Fund there were some countries like China Korea etc which declared par values which the Fund did not accept but they still continued. Similarly multiple currency practices were adopted by a large number of countries especially by South Africa and Indonesia. The Fund proved to be too weak to check these undesirable practices.

Secondly as regards its objective of providing financial assistance to deficit countries and of stimulating levels of income and employment in the world the Fund has not achieved any large measure of success. After the Second World War some countries emerged as predominant creditors (like the U.S.A. U.S.S.R.) while others as chronic debtors (like the Asian countries). The I.M.F. has completely failed to solve the problem of the underdeveloped chronic debtor countries. In these countries the remedy is stimulating income and employment by long term international lending. The resources of the Fund are too inadequate to answer this need. This deficiency has however been met recently. In the New Delhi conference of the Fund in 1959 the quota of all the member countries has been raised by 50%. The terms of lending have also been suitably liberalised. It has been provided that a country can borrow from the Fund in one year to the extent of the full amount of the quota as against 25% laid down previously. This will go a long way to meet the requirements of high levels of income and employment in the world.

From the very inception of the I.M.F. India has been one of the major beneficiaries of this novel organisation. Particularly since the launching of the Five Year Plans the I.M.F. has been an important agency of finance for planned economic development in India. Over the period of the First Five Year Plan the I.M.F. provided to India financial assistance to the extent of Rs 40 crores which accounted for nearly 20% of the aggregate foreign capital over the period. During the period of the Second Five Year Plan the significance of the Fund as an agency of finance increased still further. Between 1956-60 the credit advanced to India amounted to nearly Rs 85 crores 50% of which was meant for specific projects of development approved by the Fund.¹ The credit advanced during the Second Plan period was of longer duration than that provided over the period of the First Plan.

Besides providing financial assistance the I.M.F. collaborated on behalf of India with the foreign countries on the supply of technical know how to India. Besides this an I.M.F. team of experts on monetary and financial affairs visited India and submitted a report entitled *Economic Development with Stability*. In this

¹ D K Shome Financing the Five Year Plans *Yojana* 10th Dec 1960

lucid and thought provoking report, besides presenting a survey of the capital requirements of the different sectors of the Indian economy, the team made valuable suggestions regarding the necessary monetary and fiscal policies

POINTS OF REMEMBER

1. The I M F was established in 1944 with three basic objectives (a) promotion of multilateral system of payments, (b) maintenance of exchange stability and (c) stimulating income and employment in the world by international lending

2. Every member country is assigned a subscription quota on the basis of its population, national income and foreign trade. Financial assistance is provided to the member countries out of this fund in times of need

3. In order to promote exchange stability, the fund has prohibited certain undesirable types of exchange control

4. The Fund is an improvement over the Gold Standard in that the rate of exchange is not rigidly fixed, it is also an improvement upon the Paper Standard in that there is easy convertibility and exchange control has been restricted

5. The Fund has failed to maintain exchange stability and it has also failed to promote high levels of income and employment by long term international lending

6. India has been a major beneficiary of the I M F and has received besides financial assistance technical personnel and advice on monetary and fiscal affairs.

SELECT READINGS

1. Crowther, Geoffrey *An Outline of Money*, pp 325—335
2. Meade, J. E. *Planning and Price Mechanism*
3. Enke and Salera *International Economics*

Q 23 Examine the working of the Indian money market and suggest remedies for its improvement (Nagpur 1960)

Sketch in broad outline the structure and functioning of the money market in India at present and discuss how far it is sensitive to Reserve Bank action (Poona 1960)

What are the characteristics that distinguish developed from under-developed money market? (Nagpur 1956)

Ans The money market refers to the purchase and sale of the services of money "Money" includes mainly currency and

credit. Money is purchased and sold in the sense that the dealers in money buy the savings from the depositors at a low rate of interest and sell the same to the debtors at a higher price—the difference being the surplus that is appropriated by the dealers. The money market consists of the sum total of all the lenders and borrowers who are in contact with each other for purposes of lending and borrowing. In order to understand the working of the Indian money market we have to examine the nature and operations of the various agencies that undertake the business of collecting deposits from those who save and extend loans and credits facilities to their customers. The Indian money market is characterised by a diversity of institutions at the apex of which stands the Reserve Bank of India on the top of a pyramid at the bottom of which there is an expansive stratum of village money lenders cum traders. In between the two we have the co-operative credit societies, post-office savings banks, indigenous bankers, joint stock banks inclusive of the State Bank of India, the various finance corporations of the Central as well as the State governments, and the foreign exchange banks. In addition to these agencies that deal in the services of money, there is a good deal of lending and borrowing in kind, especially so, in the rural areas and the rate of interest charged in such cases is invariably exorbitantly heavy. This, however, usually goes unaccounted for, from being examined as a part of the regular money market since there is no mediation of money to facilitate such transactions.

In terms of the number of people involved as distinguished from the value of the transactions struck the rural money market is certainly by far the most important. The monetary needs of the villagers of our country are met by the following agencies in accordance with the findings of the Rural Credit Survey Report —

<i>Credit Agency</i>	<i>Proportion of borrowing from Agency per cent</i>
1 Govt	3 3
2. Cooperatives	3 1
3 Relatives	14 2
4 Landlords	1 5
5 Agriculturist money lenders	24 9
6 Professional , , ,	44 8
7 Traders and Commission Agents	5 5
8 Commercial Banks	0 9
9 Others	1 8
	100 0

The figures speak for themselves. It is apparent that agriculturist money lenders, professional money lenders and the traders and commission agents together supply more than 75% of the credit required by the villagers. Relatives are of importance in the hour of need supplying as they do 14.2% of the credit. The Government and the co-operatives touch the fringe of the problem and the Commercial Banks are only a small fry.

In view of the perpetual poverty of the village folks and the eternal need for credit to meet the unpredictable vagaries of a merciless providence, there is always an unfailing demand for money. Loanable funds on the contrary are miserably scarce owing mainly to the general economic backwardness of the country and especially so, of the rural areas. The sellers of monetary services enjoy a status of almost an unmatched privilege. It is a fantastic position of monopoly. The range of the rate of interest charged by private agencies stretches from 12% to 150%!¹ The poorer a man, the smaller the security to offer and hence, the higher would be the rate of interest. From each according to his weakness seems to be the principle religiously followed by the pious money lenders of our country.

The State can hardly make amends for the situation by law, unless a certain element of competition is introduced as between the lenders. The money market in the country side is entirely a seller's market. The supply of credit has to increase enormously to come anywhere in the neighbourhood of the strength of demand. Legal restrictions on the lenders to curb undesirable practices can go a long way in the sense of driving them away from the open market to the black market. The basic economic disequilibrium between the demand for money as against the supply can hardly be rectified through legislation, unless really effective economic measures are undertaken. The best measures undertaken recently in the direction of improving the conditions of the money market in the country side include increased governmental lending to the farmers and the artisans and an expansion of credit by the co-operative societies with the great assistance that is being rendered by the Reserve Bank of India. Too many legal restrictions have led to a shrinkage of credit which helps the unscrupulous money lenders all the more to extract prohibitive rates of interest. The extension of organised banking facilities to the country side still remains a dream.

The indigenous bankers are to be found mainly in the small towns. They combine trading along with banking and supply the credit needs of trade and commerce. Most of the indigenous bankers refuse to be drawn within the fold of the regular money market in the country. The efforts of the Reserve Bank to bring them into line with the banking system have not succeeded so far.

The post office savings banks have made a considerable headway ever since their start in the year 1882. Their number stands today around 70,000 and the amount collected by them by the end of 1958, stood at Rs. 227 crores. If the post office savings banks are properly organised these could turn out to be the best agency for galvanising the rural savings. Much needs to be done in the direction of improving the working of the post office savings banks.

By far the most important agency in the Indian money market is the joint stock banking institutions. These are also known by the name of commercial banks. They are all located in the urban areas and have a ready access to the savings of the town and city dwellers. The history of joint stock banking in India has not been very happy. A number of banks have failed and many of the small banks are always faltering. The main causes responsible for the failure of a large number of banks are paucity of capital, inexperienced, and unskilled management, insincerity of the staff, fraudulent practices a low liquidity ratio, indiscriminate lending on the basis of insufficient security to the favourite customers, reckless branch banking and the indifference on the part of the government. The Banking Companies Act of 1949 as amended in 1957 gives great powers to the Reserve Bank of India to rectify the anomalies in the Indian banking system. The Reserve Bank can now prescribe the lending policy, the liquidity ratio, inspect the accounts and supervise the activities of the Board of Directors of these commercial banks. The Reserve Bank has the powers to license or not to license a bank, demand compulsory returns and power of scrutiny over the affairs of banking companies. Attempts are also being made to develop a bill market.

The most important drawback of the Indian money market is the inadequacy of industrial banking as distinguished from commercial banking. The investment corporations have recently filled the gap to some extent. As yet our money market is a very loose structure.

POINTS TO REMEMBER

1 *The money market refers to the purchase and sale of money services and includes all the lenders and borrowers doing business in money.*

2 *The Indian money market has a diversity of institutions from Reserve Bank to the village money lenders.*

3 *The rural credit structure as brought to light by the Rural Credit Survey of the Reserve Bank of India shows the importance of the private money lenders.*

4. We hate a monopolistic interest-structure in the country-side

5. The role of the indigenous bankers and the post office savings banks

6. Joint stock banking, defects and remedies.

7. Inadequacy of industrial banking.

8. The Banking Companies Act of 1949

SELECT READINGS

1. Sharma *Indian Money Market*

2. Reserve Bank *All India Rural Credit Survey (General Report)*

3. Mitra *Post War Banking in India*

Q. 24. Why has Prof. B R Shenoy recently suggested the devaluation of the rupee ? What effect would it have on the financing of India's Third Five Year Plan ? (Allahabad 1961)

Discuss the arguments for and against the revaluation of the rupee (Poona 1959)

There are certain economists in the country who advocate further devaluation of rupee in order to solve the problem of acute shortage of foreign exchange which the country is facing at present Give your opinion supported by arguments in favour of or against further devaluation (Rajasthan 1959)

Is the rupee over-valued at present ? Would devaluation of the rupee succeed in removing our balance of payments difficulties ? (Bombay 1958)

In the light of the present balance of payments difficulties is there a case for revaluation of the rupee ? (Gujarat 1958)

Study the factors which determine the value of money. Has value of the Indian rupee fallen in recent years ? Give reasons (Agra 1958)

Ans Devaluation is a device to depreciate the value of the currency of a country in terms of the currencies of other countries. Should the Government of India decide to offer more of rupees per pound or per dollar, the value of the rupee goes down in terms of the pound or the dollar and hence the Indian rupee is said to be devalued. The buyers of Indian currency have to pay less of their own currency for a given sum of rupees or they get more of rupees for a given sum of their own currency. The extent of the gain made by foreigners depends on the measure of devaluation effected and the intensity of their demand for the rupee. The gain varies directly

in proportion to the cut in the value of the rupee and the strength of demand of any particular foreign country. The main object of devaluation is to make the devalued currency cheaper so that the demand for exports might increase. Devaluation in order to promote the exports from a country relies on the usual law of demand which states that a fall in price is accompanied by a rise in demand. Devaluation is really equivalent to a cut in the general level of prices of all commodities which find an export market. The prices of exports remaining the same, if there is a depreciation in the external value of the rupee, the exports automatically become cheaper since the buyers are required to return a lesser quantity of their own goods in payment of their imports. For a given value of their exports, they would be in a position to get more of imports. Consequently, all other things remaining the same, the devaluation of the currency of a country should lead to an increase in its exports.

The influence of devaluation on the imports of the country whose currency is devalued is exactly the opposite of that on the exports. More of the devalued currency has to be paid to buy foreign currencies and hence the value of the imports automatically rises. The total rise in the value of the imports depends on the measure of devaluation on the one hand and the total quantity of imports on the other. We could expect a fall in imports subsequent to the devaluation of the currency of a country, since imports become costlier. This also is based on the usual law of demand and hence subject to all the limitations of the law of demand. The main object of devaluation is to encourage exports and discourage imports. The justification for devaluation must be made on the establishment of the evidence that there is a greater need for exports and a smaller need for imports. In some instances as in the case of our country the need for devaluation might arise out of the sheer incapacity to pay for the imports which keep on mounting owing to the ever growing needs of a developing economy. A developing economy has to import a variety of strategic factors of production, not available within the country and the faster the rate of growth contemplated the greater would be the need for imports especially so, if the country aspiring to grow does not possess within its own territory the necessary requisites for growth. So has been the case with India. We have been importing on such a large scale ever since our launching on the development plans that we have been finding it increasingly difficult to pay for our imports by raising the value of our exports to match the increase in imports. The result has been that we have to face the ever growing gap between our imports and exports which is often referred to as the balance of payment difficulties. The best index of the gap between our imports and exports is the decline in our foreign exchange reserves which stand as follows —

(In lakhs of rupees the position at the end of the year)

1950-51	971.41
1953-56	824.61
1956-57	681.10
1957-58	121.22
1958-59	374.51

The total fall in our reserves since the beginning of the second plan comes to Rs 543 crores and there is hardly any scope for a further scaling down of the reserves. If we are not to draw our reserves down any further, there are only two courses open to us—either to axe our imports significantly or increase our exports enormously or attack the problem from both the sides. If we could achieve the objective by cutting our imports, the question would not be so difficult as it has been in view of the unavoidable needs of a growing economy. It is impossible for us to cut our imports save in the case of some non-essential imports. Consequently, our chief reliance must be on the promotion of exports for which the Government of India has already instituted a number of measures, for the maintenance of quality through certification of standards by the Indian Standards Institution, exploration of markets through the formation of export promotion councils, supply of cheap raw materials to exporting industries, provision of cheap and quick transportation facilities, institution of Export Risk Insurance Corporation and establishment of the State Trading Corporation etc. to avoid internal competition among exporters. Whereas these measures are certainly useful in promoting exports, the real issue is whether they would by themselves be sufficient to get us out of the balance of payments crisis without the need for a devaluation of the rupee in order to provide an unfailing stimulus to our exports.

The crux of the matter is that we have been living in our country powerful inflationary pressures as is evidenced by the fall in the internal value of the rupee by as much as 30% ever since the commencement of our development plans in the year 1951. There has been an enormous rise in the general level of prices. The internal value of a currency is closely linked with its external value. If our prices continue to rise, the foreign buyers of our commodities would feel that the rupee has been unduly overvalued. For a given rate of exchange, rising prices would mean less of commodities for a certain sum of money and hence the demand for our exports is likely to slacken in case we do not succeed in arresting the rise in our prices. This is of great importance especially so, when the demand for our exports happens to be price elastic. In case of monopolistic control over exports a rise in prices would not matter much since we could sell as much as before, in spite of the rise in prices. We hardly have such a

monopoly excepting in the case of commodities like jute and manganese but even if we should have a monopoly, there is always the fear of retaliation, would we exercise our monopoly power to extort exorbitant prices. There is no reason why our foreign customers should suffer the consequences of our internal inflation, especially so, when they could get cheaper substitutes of comparable quality from our rivals.

The persistence of the balance of payments difficulties over time indicates not merely the growing demand for ever increasing imports because of development plans, but also our inability to push up our exports upto the required levels the most important reason for which is the rise in our prices. In order to stimulate our exports we have to subsidise our exporters so that they might sell their wares abroad at a competitive price or reduce the cost of production of exports, or exercise high pressure salesmanship to create a demand for exports at a high price. If none of these measures succeeds, the last resort would be to devalue the currency which as we have seen is tantamount to a general reduction in the prices of all exports.

Devaluation does give a stimulus to exports by reducing their prices. It must also be remembered that devaluation would bring about a rise in the value of our imports. We get less of foreign currency, for a given sum of rupees and, hence other things remaining the same, we have to pay more to the foreigners for a given quantity of imports. In view of our inelastic demand for imports devaluation is likely to bring about an enormous increase in the value of imports and may be, we might unwillingly invite a fresh trouble in our efforts to escape from the one which we are currently facing. We have to weigh the pros as well as the cons before we decide to hit upon devaluation on grounds of expediency, as is being advocated by Prof Shenoy.

Devaluation is a drastic step to be resorted to only in extremely grave emergencies. Moreover, devaluation is based on the pessimistic presumption that the situation would not improve, unless we undertake the extreme step of reducing the external value of our rupee. We are experiencing the pangs of a growing economy. We are receiving a good deal of external assistance and recently, there has been some rise in our exports as well. There is no reason to believe that we would not be in a position to tide over the crisis of balance of payments, unless we devalue our currency. It has been made abundantly clear by our Finance Minister that Indian rupee is perfectly sound and there is no need for devaluation. Certain measures have to be taken because of the compulsion of unavoidable circumstances and so far as devaluation is concerned, there is no reason to suppose that any such exigency has come into existence.

POINTS TO REMEMBER

1 *Devaluation is a device which brings about a depreciation in the external value of a currency*

2 *Devaluation brings about a rise in the value of imports and a fall in the value of exports and produces exactly opposite effects on the incoming and outgoing trade of a country*

3 *We have been finding it difficult to match our imports with corresponding exports*

4 *We have heavily drawn upon our foreign exchange reserves ever since the commencement of our first plan in 1951*

5 *The Govt of India has already instituted a number of export promotion measures*

6 *There has been a 30% fall in the internal value of the rupee during the last ten years due to inflation in our economy*

7 *How to tide over the crisis without devaluation is the problem we may have to pay heavily for devaluation*

SELECT READINGS

- 1 Dadasaheb *Monetary System of India*
- 2 Vakil C N *Sterling Balances*
- 3 Vakil & M. Raju *Currencies and Prices in India*

Q 25 Critically examine the case for the nationalisation of Commercial Banking in India. How far could this measure accelerate the pace of economic development in the country?
(Karnataka 1960)

Examine fully the case for the nationalisation of banks
(Allahabad 1960)

Do you advocate the State ownership of the commercial banks in India? Substantiate your answer with sound economic arguments.
(Karnataka 1959)

Is a nationalised banking system essential for planned economic development?
(Allahabad 1959)

Ans. The process of economic development implies a concomitant growth of monetisation. In the pre-industrial stage of economic backwardness money does not play a dominant role. Barter occupies the prime of place. The level of economic activity stands at a low ebb. All primitive economies are characterised by the relatively unimportant role of money. As an economy grows money assumes an increasingly significant role. Monetisation

which appears to be the effect of growth in the level of economic activities, subsequent to the appearance of division of labour and the expansion of markets far and wide, becomes the condition for development at later stages. The effect turns out to be a potent cause in directing the economy on to the higher stages of growth. The significance regarding the decisive role played by the monetary factor in initiating and assisting the process of economic growth is best evidenced by the historic work done by the German and Japanese industrial banks that sponsored and promoted a number of industrial concerns almost entirely on their own initiative.

The role of the banking system in the context of a planned programme of economic development could hardly be examined apart from the problem of the role of money in general. A completely centralised over-all system of planning reduces money to a mere unit of accounting—an instrument to register the consumer's scale of preferences and measure the planner's preferences in the allocation of resources to various fields of production. In view of the complete reliance on physical planning and the total centralisation of economic authority in the State, banking and money become mere servants to help the planners in executing the programme of development. In a partially planned economy like ours however money plays the role of the servant as well as the master. To the extent the planners feel confident of whipping money into service at their own behest money has to render unquestioned obedience like a good servant and to the extent that the planners feel constrained to adjust and readjust their plan in accordance with the monetary needs of the economy the servant turns into the master. The planners stand obedient to the dictates of money planning itself being a divided process. The considerations that weigh with the governmental plan would be at variance with the considerations that weigh with the plan of the private sector of the economy. So far as the government is concerned, the aims and objects of planned development are not likely to be influenced by the desire for private profit whereas the private sector of the plan would almost entirely be determined by the profit motive. This point seems to have a good deal of importance in examining the role of banking in economic development and the controversy about nationalised *vs* private banking in the context of planned development.

The principal object of planned economic development is to ensure a rapid rate of economic growth. The pace of economic development depends on the rate of savings, the rate of investment and the input output ratio. The banking system should subserve the goal of a rapid rate of growth by raising the rate of savings, promoting the rate of investment and so altering the pattern of investment as to ensure the maximum output input ratio in the economy. Apart from the goal of a rapid economic growth we have also aimed in our country at the establishment of a socialist

pattern of society which implies increasing government ownership of the important means of production especially, capital. Nationalisation proceeds ahead simultaneously with the process of industrialisation and expansion in the size of the marketable surplus. The pattern of investment would be governed by the ideals of planning in the public sector and the profit possibilities in the private sector. We have to examine how far these various objectives of a planned programme of economic development are likely to be fulfilled by (a) private banking and (b) nationalised banking.

It is one of the most important functions of the banking system to mobilise the savings of the community by encouraging the habit of thrift and economy and inducing the people to hold their savings in the form of bank deposits. A factor of key importance in this connection is the confidence which the banking system commands from the people. It is true that the habits of thrift and economy are governed by the influence of many other factors besides the impact of a good banking system. All the same, it is undeniable that a good banking system does have its own influence in encouraging savings. If saving leads to hoarding, we better not have the savings at all excepting as a means of curbing inflationary pressures in the economy. The savings of the community must find fruitful channels of investment. This job must be undertaken by the banking system. In our country we find that the institution of banking is confined mainly to the urban areas. The function of encouraging savings and mobilisation of savings for purposes of investment remains still a far cry from reality. Private bankers would undertake this function only if there is a possibility of making profits. The case for nationalisation of banking in the interest of economic development rests in our country on (i) the failure of private bankers in encouraging a better rate of savings (ii) the failure in commanding the confidence of the people to keep their savings with the banks as is evidenced by the large scale investment in gold and jewellery and (iii) the failure in the direction of showing to the people fruitful channels of investment. Nationalisation of banking is likely to be helpful in promoting the economic development of the country to the extent that it helps in gaining the confidence of the people in view of the obviously unquestioned credit of the government. The threat of bank failures could be ruled out. Technical guidance could be provided to the investors as to the most useful channels of investment. There can be a revolutionary change in the attitude of the people towards banking especially, in the rural areas.

We have to turn our attention to the role of the banking system in promoting the rate of investment. The Indian banks are mostly commercial banks in the sense that their primary job has been to finance trade and commerce on a short term basis. Private bankers like other private entrepreneurs are interested

in the highest rate of profits as quickly as possible. Long term investment in industrial undertakings requires a better sense of adventure and enterprise and a preparedness to face the risks of the market. The history of banking in our country shows that there is very little which the private bankers of our country could claim by way of long term encouragement for rapid industrialisation or for rapid agricultural development. Nationalisation of banking seems called for to convert the banking system from the commercial to the industrial way of perpetrating their existence. This does not mean that trade and commerce are unimportant. All the same, an excessive concern with merely trade and commerce comes in the way of the real economic development of the country.

What could otherwise be a potent instrument for rapid economic development has become in our country just a profit seeking business. The savings of the country find investment into wrong channels under the impact of the profit motive. A wrong use of savings can be as much an obstacle to economic growth as the scarcity of savings. Unfortunately for our country, we have both these evils abundantly encouraged by the private banking system. We could maximise the output input ratio only by selecting strategic fields of investment. In the present system, guided by profits and favouritism, there is almost an anarchy as is evidenced by the complete absence of any national consideration. Nationalisation of banking appears a necessity as a complementary measure to ensure effective execution of the programme of development, especially when we have the goal of establishing a socialistic pattern of society. Banking is the most important key industry of the country and no socialist government can afford to have it in private hands.

POINTS TO REMEMBER

1 *Monetisation which comes about in the wake of industrial development becomes the condition for economic growth and hence, arises the importance of the banking system in economic development*

2 *In a completely planned economy the connection between banking and economic development is different from what it is in a partially planned economy like ours*

3 *The objectives of planning pertain principally to the promotion of a rapid rate of economic growth for the establishment of a socialist society*

4 *The efficacy of the banking system should be judged from the angle of (a) the rate of savings, (b) the rate of investment and (c) the pattern of investment*

5 The banking system of India that is controlled by private interests does not stand the tests on any of the criteria

6 Nationalisation appears imperative not only in the interest of a rapid growth, but also from the angle of establishing a socialist society

SI LI C1 READINGS

- 1 Lewis *Theory of Economic Growth*
- 2 Baran P *Political Economy of Growth*
- 3 Sharma *The Indian Money Market*

Q 1. "A monetary economy is essentially one in which changing views about the future are capable of influencing the quantity of employment and not merely its direction "

Discuss in the light of the above whether India can be termed a monetary economy. (Bombay 1960)

Ans. A monetary economy as distinguished from a non-monetary system is characterised by the dominant role played by money in the determination of the level and pattern of economic activity. In a non monetary economy, production, distribution and exchange are organised primarily from the angle of immediate consumption and not on the basis of the expected monetary gain to be acquired through the process of exchange in terms of money. A non-monetary economy could possibly exist only at an extremely low level of economic activity under primitive conditions of production and distribution. Every improvement in the organisation of production and distribution in the course of economic evolution has been made possible partly because of the ease and facility provided by money as a medium of exchange, a measure of value, a standard in terms of which value could be calculated, and above all, a store of wealth which, prior to the emergence of the monetary system was required to be held in the form of a store of umpteen commodities, subject to all the inconveniences of maintaining a big godown.

The view that monetary economy is essentially one in which changing views about the future are capable of influencing the quantity of employment and not merely its direction seems to equate a monetary economy with the capitalistic mode of production and distribution, for, it is only under the capitalistic order that changing views about the future in terms of profit-making possibilities are of decisive significance. In a socialist society, "changing views about the future" would not obviously refer to the prospects of profits in various directions since the entire business of organising economic activity is not at all motivated by the incentive of making a profit. "Changing views" in a society organised on the basis of the socialistic principles might refer to the differences of opinion among the planners regarding the measures to be adopted to promote the highest good of society. The motive of private profit being eschewed, expectations regarding the future would not play the same significant role that we observe under capitalism. The quantity and direction

of employment in a capitalist society would be determined on the basis of the expectations of the entrepreneurial classes regarding the possibility of making a profit. In other words, we have to examine the relationship between expectations on the one hand and the quantity and direction of employment on the other.

Expectations about the prospective change in prices play a decisive role in shaping the mind of the entrepreneurial classes in their decisions about the volume of investment to be undertaken. Actuated as they are by the incentive of making the largest amount of profits as quickly as possible, their calculations would be based on the expected difference between the present prices and the future prices—of course, only the positive difference. The prospects of a negative difference would obviously depress economic activity to its lowest ebb and would act as a great stumbling block to economic progress. Production in anticipation of a future demand must necessarily be conditioned by the changing views about the future. The views in question would be views about the expected change in the sale prices as against the change in the purchase prices. What matters for the entrepreneurial classes is the excess of the sale prices over the purchase prices.

The Keynesian economic analysis draws a basic distinction between the long term expectations and the short-term expectations and contends further, that there is hardly any rational ground to be either optimistic or pessimistic about what is going to happen in the future—even in the very near future say after about five years. The tendency of the entrepreneurial classes seems to be to allow themselves to be too rashly and disproportionately influenced by the irrational projections of the present into the future. There are waves and waves of optimism and pessimism which move the entrepreneurs to take their strides in one direction or the other. The buoyancy induced by an optimistic state of mind leads to intense economic activity and the collapse of spirits produced by a pessimistic state of mind does incalculable harm in a depression of economic activity.

The quantity and direction of employment in the long run must obviously be based not merely on the expected rate of profits which in the Keynesian terminology is the marginal efficiency of capital but also on the non economic motivation of the entrepreneurs to venture out into new fields just for the thrill and romance of a new adventure. There is a good deal of economic activity that emerges out of the sheer spontaneity of natural optimism of the entrepreneurs. But for such spontaneity, the sum total of economic activity would be very small indeed, in the world.

The prospects of a good increase in the volume of employment get greatly atrophied because of the undesirable diversion of the unvestible funds into speculative activities, motivated by the desire

to reap a rich reward of profits within the shortest period of time. The stock exchanges keep on re-assessing the value of the existing investments in terms of the expected yield of dividends and evoke certain psychological moods with the investing classes to employ their funds in one direction or the other in search of a fortune. The harm done to real investment and employment by the misuse of investible funds for speculative purposes is highly anti-social and needs to be curbed by law to the extent possible. There is, however, a likely chance of an adverse effect as well. The stock exchanges give a peculiar sense of security to the investors because of the command over liquidity provided by the stock exchanges. Investment and employment receive a stimulation to the extent that investment is undertaken with a clear eye on the possibility of realising locked up funds in the liquid form at any time in accordance with one's convenience and requirements.

The volume and pattern of employment would be governed by the volume and pattern of investment in the economy. The volume of investment would turn on the availability of investible funds and the marginal efficiency of capital. The former would depend on the liquidity preference of the people taken in conjunction with the fiscal and monetary policy of the state and the latter would depend on the changing views about the future. The marginal efficiency of capital depends to a large extent on the marginal efficiency of labour as well, along with the dependence on the uncertainty of changing prices. In a monetised economy the volume of employment turns on the marginal efficiency of capital (which includes marginal efficiency of labour as well) and the level of money wages. The workers are extremely sensitive to the level of money wages and not so much to real wages. A reduction in real wages brought about by a rise in prices is not resisted with the same passion as a reduction in money wages. The entrepreneurs also are equally concerned with money. Money obviously moves into those channels of investment and employment into which there are better chances of making still more of money. A monetary economy is one in which money is the master guiding the course of the economy.

In the light of the salient features of a monetary economy, India cannot be termed a completely monetary economy. In the primary segment of the Indian economy production is organised primarily for self subsistence and not for exchange in terms of money. Production is hardly price elastic excepting in that part of the primary sector which is commercialised in the sense that the products of this sector have to seek a market for exchange in terms of money. The production of such commodities would be guided and governed by the prospects of making a monetary fortune. The organised sector of the Indian economy is certainly completely monetised since the motivation behind such economic activity is exactly the same as we find in the case of a monetary economy. A

large proportion of the economic activities of our country are carried on either for self-subsistence or for small barter and hence the only conclusion which we could draw is that India is a monetary economy only in parts. The volume and pattern of employment in the Indian economy is not totally dependent on the role of money. We are industrialising and monetising the economy and in course of time ours also would be a monetary economy.

POINTS TO REMEMBER

- 1 *The salient features of monetary as against a non monetary economy centre around the role of money*
- 2 *It is, perhaps, wrong to equate a monetary economy with the capitalistic order of society*
- 3 *"Changing views about the future" have a decisive role to play under capitalism but not so under socialism so far as money is concerned*
- 4 *The entrepreneurs are guided by waves and waves of optimism and pessimism. Expectations play a decisive role in the determination of the volume and pattern of employment*
- 5 *The desire for quick profits does a lot of harm as is seen on the stock exchange*
- 6 *Investment is undertaken on the basis of the expected MEC in conjunction with the rate of interest*
- 7 *The Indian economy is only partially monetised*

SELECT READINGS

Keynes *General Theory*

Klein *Keynesian Economics*

Dillard *Keynesian Economics*

Q 2 While Keynes' three basic factors the propensity to consume, the marginal efficiency of capital and the interest rate are independent variables they are nevertheless closely interrelated. Develop this statement (Mysore 1957)

Ans The three concepts of the propensity to consume the marginal efficiency of capital and the rate of interest constitute the basis of the whole Keynesian model of income and employment. These factors are independent variables of the system in the sense that one is not functionally related to the other. But still they are interdependent variables in the sense that they together determine the levels of income and employment in the community and a change in one variable has its repercussions upon the other two variables. As

Keynes has put it. These determinants (rate of interest, marginal efficiency of capital and the propensity to consume) are in fact themselves complex and each is capable of being affected by prospective changes in all others. But they remain independent in the sense that their values cannot be inferred from one another."

Now let us see how they are interrelated¹ and how they together determine the aggregate income and employment.

The rate of interest according to Keynes is determined by the supply of money in conjunction with the demand for money. The supply of money is determined by the banking system and can be taken to be given at any point of time. The demand for money may be of three types (a) transaction demand (b) precautionary demand and (c) speculative demand. The first two types of demand for money are insensitive to changes in the rate of interest and sensitive to changes in the level of income while the speculative demand for money is highly interest elastic.² If M be the supply of money, y the level of income and r the rate of interest we have the relation called the Liquidity Function

$$M = f(r, y)$$

It is conceived that the demand for money rises with an increase in income and falls with an increase in the rate of interest.

This functional relationship has been represented in Fig 1. The supply and demand for money are represented on the x axis and the rate of interest on the y axis.

Let the total quantity of money in circulation be OM which is given and constant and that is why the supply curve of money is a vertical straight line QM . Let LPy be the liquidity preference schedule at a given level of income y . It slopes downward

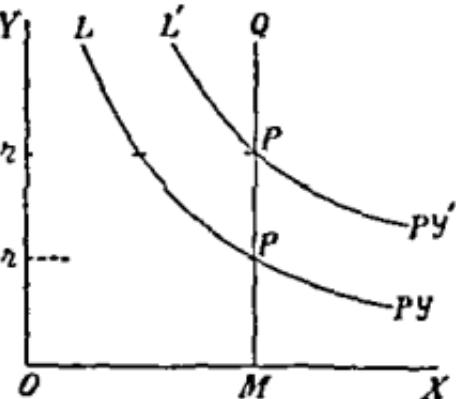


Fig 1

showing that the demand for money rises with a fall in the rate of interest and vice versa. The rate of interest r is determined at the point P where the supply of money is exactly equal to the demand for money. Now let the level of income rise to y and on account of this the liquidity preference schedule rises to LPy . The rate of interest rises to r where the supply of money again equals the demand for money.

1 Keynes—General Theory p 184

2 See Answer to Question No 1

The propensity to consume means in plain language the desire of the people to spend their income on consumption goods

What are the factors upon which the propensity to consume depends? The single fundamental determinant of the propensity to consume is the level of real income. There is a positive correlation between consumption and income. As the level of income rises the people have a stronger tendency to consume and *vice versa*. But it is significant to note that when income increases the consumption does not rise by the full amount of the increase in income. Keynes contends that when income rises the consumption increases by less than proportionate increase in income. To put it technically the 'marginal propensity to consume' is less than unity. The marginal propensity to consume is the ratio of the change in consumption to the given change in income. The marginal propensity to consume being less than unity implies that when income for instance increases by 80% the consumption increases by less than 80%, say 60% so that the marginal propensity to consume is equal to 60%/80% or 75. Similarly when income decreases say by 30%, the consumption decreases by 20% the marginal propensity to consume is equal to 20%/30% or 66. The maintenance of consumption at a level higher than the fall in income is made possible by the drawing down of the past savings.

The propensity to consume also depends upon the rate of interest. But the relationship between the propensity to consume and the rate of interest is however remote and indirect.¹ It is postulated that a rise in the rate of interest by increasing the propensity to save weakens the propensity to consume. If C be the aggregate consumption, y the level of income and r the rate of interest we have the relation called the Consumption Function $C = f(y, r)$

Assuming that the rate of interest is given and constant the relation between income and consumption has been represented in Fig 2

In the diagram ON represents the Null Line or the zero-saving line showing that at all the levels of income consumption is exactly equal to income. In this case the marginal propensity to consume is equal to unity. This line serves as a standard. The line (it may be a curve also) MC represents the actual propensity to consume. To the left of P it is above the Null Line indicating negative savings i.e. when income falls the consumption does not fall by the full amount but less than the reduction in income. Be-

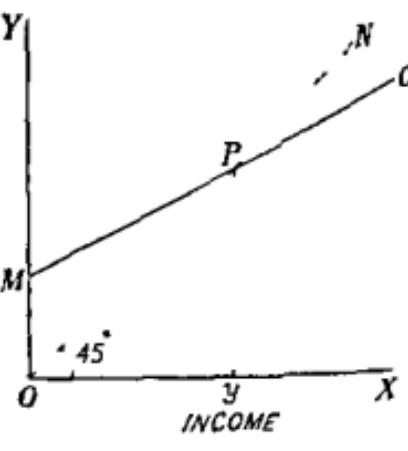


Fig 2

beyond P , there are positive savings—but MC lies below to the right of the Null Line showing that when income rises, the consumption increases by less than the rise in income. The line MC does not start from the origin, O because when the income is zero the consumption is not nil.¹

The Marginal Efficiency of Capital is defined by Keynes as 'that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital asset during its life just equal to its supply price'.² In plain language the marginal efficiency of capital means the expected rate of returns or profit by the investors over the life time of capital asset. The level of investment is determined at the point where the marginal efficiency of capital is equal to the rate of interest. If I be the volume of investment, r the rate of interest and C the volume of consumption then we have the relation, $I = \phi(r, C)$.

It is postulated that a fall in the rate of interest increases the marginal efficiency of capital relatively to the rate of interest while a fall in consumption reduces it.

The supply of money in conjunction with the demand for money determines the rate of interest given the level of income. The given level of income together with the rate of interest determines the consumption. The volume of consumption and the rate of interest determine together the level of investment. If the level of investment corresponds to the point where the marginal efficiency of capital is equal to the rate of interest the system is in equilibrium otherwise changes would take place in the variables until they are equal to each other. This process of causation has been explained in Figures 3, 4 and 5.

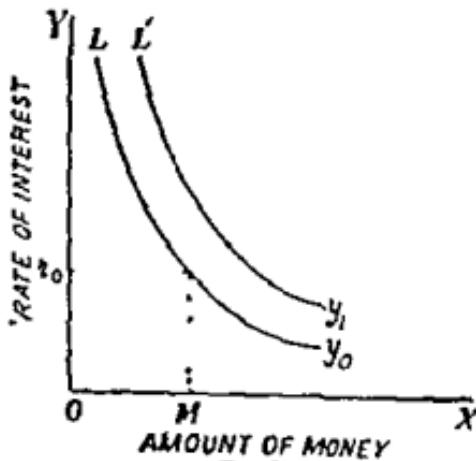


Fig 3

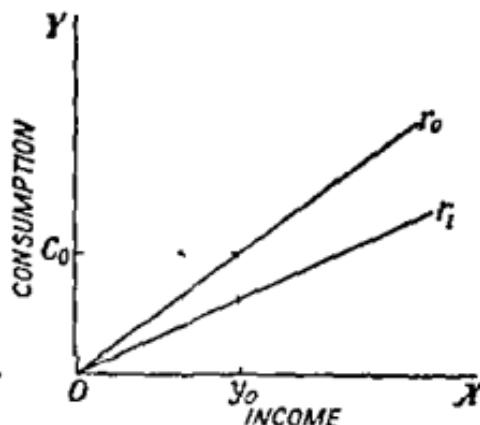


Fig 4

In Fig 3, the Ly curves represent the liquidity preference

1 Kurihara—op. cit., p. 32.

2 Keynes—op. cit., p. 133.

chedules at different levels of income. Given the level of income y_0 , the supply of money M and demand for M determine the rate of interest r_0 . In Fig. 4, the r curves show levels of consumption at different rates of interest. The given level of income y_0 and the rate of interest r_0 determine the consumption C_0 . In Fig. 5, the rate of interest r_0 and the consumption C_0 determine the volume of investment I_0 .

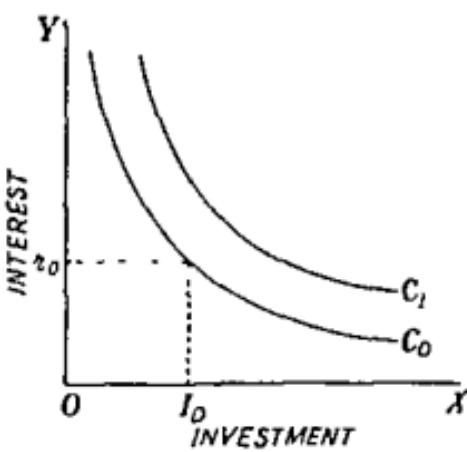


Fig 5.

It is thus clear that there is a close interdependence among the three apparently independent variables

POINTS TO REMEMBER

1. The three fundamental variables of the Keynesian system, the rate of interest, propensity to consume and the marginal efficiency of capital are independent in the sense that they are not functionally related to one another.
2. But they are interdependent because they act and react upon one another and thus determine the levels of income and employment.

SELECT READINGS

1. Keynes : *General Theory*, Ch. XVIII.
2. Hansen : *Guide to Keynes*, Ch II, pp. 165-169
3. Lange, Oscar : *Theory of Interest and the Optimum Propensity to Consume Readings in Monetary Theory* (A E A)

Q 3 Examine the effect of a general wage cut on the volume of employment. (Delhi 1960)

It is impossible to increase employment through a reduction in money wages. Give reasons for your answer. (Gauhati 1959)

Ans. According to the classical school, the basic determinant of the volume of employment at any time is the level of wages. In a competitive economic system, the classicists contended, where the wage rate is determined by the free play of the forces of supply of labour and demand for labour, the possibility of any permanent unemployment is ruled out. For, if there is unemployment i.e., if the supply of labour is greater than the demand for labour at any

There are certain additional grounds on which a flexible monetary policy is to be preferred to a flexible wage policy. First, a policy of general wage cut, even if the trade unions could be persuaded to accept, goes against the democratic ideal of social justice. The fixed incomes and particularly the rentiers receiving income from bonds and other forms of contractual securities would gain a real advantage at the expense of the working class. Secondly, a lower price level consequent upon the wage cut increases the real burden of both the private and public debts. If the public debt is very heavy, this becomes a major objection to any deflationary policy like wage and price reductions.¹ Thirdly, in the case of an unclosed system, a reduction of money wages, though it improves the balance of trade is likely to worsen the terms of trade and thus there will be a reduction in the real income.²

A reduction in the rate of interest on the other hand, is within the easy reach of the monetary authority and its impact on the level of employment via the volume of investment is much more direct and immediate.

Keynes while writing the *General Theory* did not consider the 'Pigou effect'.³ But the Keynesian conclusions are in no way impaired by this.

Prof. Pigou has introduced into the classical savings function an additional variable namely the real value of cash balances. Thus $S - F(i, M/P)$, where i is the rate of interest, y , the level of income M the quantity of money in circulation and P , the average price level so that M/P is the real value of cash balances. By basing his analysis on the assumption that a higher real value of cash balances is associated with a lower propensity to save, Pigou contends that falling wages and falling prices by raising the real value of cash balances would step up the aggregate consumption. An increase in consumption would lead to full employment through an increase in investment.

It has been rightly contended by Prof. K. K. Kurihara that the falling wages and prices instead of promoting consumption may strengthen the propensity to save. 'For with wages and prices declining unhindered consumers' over all asset position can be so impaired as to strengthen their desire to add more to their assets and less to their consumption, especially if the real value of consumer durables is reduced much more than that of liquid assets is increased'.⁴ Prof. Patinkin on the other hand has emphasized that

1 Keynes—*op. cit.* p. 268.

2 Keynes—*op. cit.* p. 263.

3 N. Kaldor Prof. Pigou on Money Wages in Relation to Unemployment, *Economic Journal* 1937

4 K. K. Kurihara—*Introduction to Keynesian Dynamics*, p. 169

the possible stimulating effect of larger real cash balances on consumption may well be offset by the discouraging effect of increased debt burden (in real terms) on consumption due to lower prices, to leave the net effect negligible, if any¹

Prof Oscar Lange has set the problem whether a general cut in money wages is capable of ensuring full employment in the framework of the general equilibrium analysis. He considers wage flexibility as a special case of the general theory of price flexibility and analyses the conditions under which wage flexibility may be successful in restoring full employment equilibrium²

Let there be unemployment of a factor of production. If the factor price is flexible it would fall which would generate two effects. First the prices of all other factors being constant a fall in the price of the unemployed factor induces a substitution of this factor for other factors. This is called the 'substitution effect'. Secondly the marginal cost of the commodities into the production of which this factor enters would fall. The prices of products remaining constant this would cause an expansion in output and therefore increase the demand for the unemployed factor. This is described by Lange as the expansion effect

So far the prices of other factors and other commodities have been assumed to remain constant but they are also subject to variation. When the unemployed factor is substituted for other factors the demand for other factors falls and therefore their prices. The substitution effect can take place only when the prices of the other factors fall less than in proportion to the fall in the price of the unemployed factor. Similarly the expansion effect can materialise only when the prices of the commodities produced with the unemployed factor fall less than in proportion to the fall in the marginal cost

Under what circumstances will these happen? Lange's answer to this is that the 'monetary effect' should be present and it should be positive. He defines monetary effect as 'the reaction of the community to a proportional change in all prices i.e. whether the community reacts by a substitution of goods for money or by a substitution of money for goods'. The monetary effect is said to be positive when 'a proportional fall of all prices causes a substitution of goods for money and vice versa'

That a positive monetary effect is essential if the reduction in the price of a factor of production is to be successful in restoring full employment can be seen by considering what would happen in a situation where the monetary effect is absent or is negative. Let the prices of all factors and products fall in the same proportion as the price of the unemployed factor. There will be no substitution

1 Kurihara—*op. cit.* p 169

2 Oscar Lange—*Price Flexibility and Full Employment* Ch 1

of the unemployed factor for other factors or of one product for another nor will there be any expansion in the output because the product prices fall in exactly the same proportion as the factor prices. If on the other hand, the monetary effect is negative both the substitution and expansion effects would be negative leading to an increase in unemployment.

Thus from this we can conclude that a general cut in money wages would be capable of restoring full employment of labour only if the monetary effect is present and is positive.

POINTS TO REMEMBER

1. That a general wage cut is the appropriate remedy for unemployment and depression is the central tenet of the classical theory of employment
2. Keynes challenges this thesis on the ground that a general wage cut would adversely affect the aggregate volume of effective demand and therefore employment
3. Pigou's contention that falling wages and prices would encourage consumption does not hold much water
4. Lange considers the problem in the context of general equilibrium analysis and concludes that a policy of wage cut can restore full employment only if the monetary effect is present and is positive

SELECT READINGS

1. Kaldor, N Prof Pigou on Money Wages in Relation to Unemployment *Economic Journal*, 1937
2. Keynes J M *General Theory* Ch 19
3. Kurihara, K K *Introduction to Keynesian Dynamics*, Ch 10
4. Lange Oscar *Price Flexibility and Full Employment*, Chs 1-3.
5. Hansen *Guide to Keynes* Ch 10 (pp 179-182)



Q 4 'So long as there is unemployment, employment will change in the same proportion as the quantity of money, and when there is full employment, prices will change in the same proportion as the quantity of money' Discuss (Bombay 1957)

Ans What precisely is the relationship between the quantity of money in circulation and the volume of employment and the general level of prices has been one of the principal topics of the *General Theory* of Keynes. The General Theory contends that the volume of employment in the pre full employment period varies directly in proportion to the change in the quantity of money. Similarly, it is held that the general level of prices after the attainment of "full employment", changes directly in proportion to the change in the quantity of money. It is clear there are two points

which need to be carefully examined—(i) The relationship between money and employment and (ii) the relationship between money and prices. Both have to be analysed on the basis of the assumption that 'full employment' has already been attained because currently, we are concerned with only one stage of the General Theory. The conception of 'full employment' that is relevant has to be taken in the context of a developed economy with a major industrial sector from the angle of employment as well as output.

Keynes in his *General Theory* was trying to analyse the forces which determine output and employment in an economy. For this purpose he confined himself only to a developed unplanned free enterprise economy. Further he limited himself to the analysis of determination of output and employment in the short period only which necessitated that he should assume a given supply of productive resources, a given technology and organisational structure. A developed free enterprise economy implied an organised sensitive money and financial market, a developed commercial banking system and a high degree of mobility of labour.

In the context of such an economy, Keynes was to find out the causes which limited the working of the economy down to a chronic less than full employment position. The classical economists would not have been able to find out any explanation why such an economy could ever remain at less than full employment for a reasonably long time. But Keynes was no believer in Say's law of markets according to which supply creates its own demand. Rather he started from the fundamentals and found that Say's law should have no sanctity for the economist because deficiency of effective demand was a regular feature of the developed economies.

We find that though Keynes was more concerned with the causes of this deficiency of effective demand which forced the economy to remain at less than full employment position, he was aware of the fact that at times the economy may be pushed beyond full employment position by artificial means. In such a situation not real employment and income but prices will rise. For a fuller analysis, therefore we discuss in brief what according to Keynes causes unemployment, how this unemployment can be remedied and what happens when our measures are stronger than required by the circumstances.

First of all it must be noted that by full employment Keynes means absence of involuntary unemployment. Functional unemployment and voluntary unemployment are permissible in the Keynesian system just as they are allowed in the classical system but once full employment is reached so that all those who want to get employment at the going wage rate are able to find jobs, further pushing of the forces which brought about this full employment will not be able to further increase employment and income. With the existence of unemployment, by definition, an excess capacity in the sense of

unemployed resources exists and therefore increasing employment will mean increasing real employment as well as real income and output. But once full employment is reached, further increase in demand for factors of production will only mean raising their prices increase in employment only in money terms and increase in output only in so far as their monetary value is concerned

The causes of unemployment in a developed economy are found by Keynes in the deficiency of effective demand. The interaction of aggregate supply schedule and aggregate demand schedule determines the particular volume of output at which sale proceeds equal aggregate cost' says Hansen in *Guide to Keynes* (p 29). But this output may not be the full employment output if the aggregate demand is not enough. According to Keynes this aggregate demand is the sum total of consumption demand and investment demand and so long as the sum of these two is not enough to call for full employment of resources of the economy there will be unemployment which can be eradicated by increasing this aggregate demand. Keynes analyses the causes which lead to the tendency of this aggregate demand of remaining less than the required magnitude. The causes are found in falling marginal propensity to consume and falling marginal efficiency of capital. With rising income marginal propensity to consume falls so that the gap between the total demand needed for sale of all the supply and the actual demand for consumption purposes goes on increasing both in absolute as well as relative terms. This gap can be filled up only through investment demand which however is a function of the rate of interest and the marginal efficiency of capital. Now it so happens that with rising investment and income marginal efficiency of capital also falls because with given productive resources etc the opportunities for further profitable investment decline and the investors feel that it is now less profitable to make further investments. The result is that while we needed an ever increasing investment to fill up the increasing gap between the effective demand and the aggregate supply price investment tends to lag behind because of falling marginal efficiency of capital.

The remedy is simple. We should increase the aggregate demand so that the supply which full employment of the economy is able to provide can be sold profitably. To increase aggregate demand Keynes suggests creation of new purchasing power by deficit financing by the state by public works programmes etc. It is here that we come to his famous remedy of increasing employment in the economy by increasing money supply. According to Keynes investment is a function of the rate of interest and marginal efficiency of capital. Now given marginal efficiency of capital investment can be increased by reducing the rate of interest. And rate of interest is determined by liquidity preference and the supply of money. Hence by increasing the supply of money it should be possible for the monetary authorities to reduce rate of interest and thereby increase investment leading to increased demand employment and output.

Now if we increase the supply of money when there is less than full employment in the economy, income and employment will increase and the multiplier process will come into action. But multiplier works in such a way that increase in income and employment tapers off at the end unless further stimulus is provided. However the economy has a number of sectors and sub-sectors and quite often at an early stage further investment in some of them is required. In other words, the acceleration process comes into being. This investment however needs finance which can be provided if more money is created. As existing supply of money is being utilised for existing flow of income and employment, further investment will be facilitated if more money supply is created. And once new investment is made excess capacity will be created making it possible for the multiplier to work again and increase employment. Thus so long as there is less than full employment increasing supply of money will be able to increase employment either through multiplier action or through accelerator or both. Also we can say that in the case of less than full employment situation injection of extra money means direct addition to money income and by virtue of excess capacity direct addition to real employment and income by creating extra demand.

The difficulty arises when the economy reaches the stage of full employment. At this stage by definition output becomes rigid and so does employment. Effective demand may still be increased by increasing money supply and by creating more of purchasing power, but here the multiplier will be able to create only more of money income. There is no excess capacity and no involuntary unemployment at going wage rate and hence employment cannot be increased. Increased money supply and hence increased demand will only manifest itself in terms of increased prices. Since on the one hand the flow of money income will be increasing and on the other the flow of goods and services will be practically the same the result will be a rise in prices. We can say that beyond full employment the multiplier will start dissipating itself into a rise in prices. Prior to full employment real income multiplier, money income multiplier and employment multiplier were the same. Now we shall have to distinguish between the three. Increasing money supply once full employment has been reached will mean rising money demand in the face of a constant flow of goods and services resulting in increased prices all round. Factors will also rise in prices including wage rates. It is however, not necessary that full employment level should be an absolutely rigid level. It is quite possible that with rising wage rates some of the labourers who were unwilling to offer themselves for employment at the going wage rates now offer themselves for employment when wage rates have risen. This increase in wage rate may not be real in the sense that this may not represent a real rise in wage rate rather it may represent an actual decline in real wages if prices of consumption goods are rising more.

than money wages, as is almost inevitably going to be the case. Money illusion may be present under the impact of which more workers now offer themselves for employment. Due to this reason employment may increase somewhat beyond the original level of full employment. But such is only a temporary thing. We can even say that the attainment of full employment strained the economy to push its full employment ceiling somewhat upwards.

But this points sharply to the fact that it would be wrong to state that beyond full employment money supply will raise the prices in the same proportion. If full employment ceiling can be raised, if real output can be somewhat increased prices will, to that extent, fail to register an increase. But on the other, anticipation of rising prices may lead to increased velocity of circulation of money, causing a more than proportionate increase in prices. Similarly, before full employment the operation of time lags in the production field can raise the prices somewhat obstructing a proportionate increase in real income and real employment.

Hence we can conclude that though in a simple manner it is correct to say that before full employment increasing money supply raises employment in the same proportion while beyond full employment, it raises prices in that proportion, we must keep in mind that this is only a simplified truth. In actual practice even before general full employment is reached it is quite logical to assume that there will be some industries where full employment will have reached so that in their case acceleration prices will start working and in the presence of time lags in the increasing of resources etc it is quite natural that factor prices in those sectors should go up. Again with rising investment in those sectors it is not necessary that output should increase instantaneously and at constant returns so that prices can rise. However a general price rise in almost all the sectors will take place when full employment in all the sectors has been reached and therefore it will not be possible to increase employment further in any appreciable way. The only result will be a general rise in prices. To quote Keynes 'Thus if there is perfectly elastic supply so long as there is unemployment and perfectly inelastic supply so soon as full employment is reached and if effective demand changes in the same proportion as the quantity of money the Quantity Theory of Money can be enunciated as follows. So long as there is unemployment employment will change in the same proportion as the quantity of money and when there is full employment prices will change in the same proportion as the quantity of money' (General Theory, pp 295-26).

The conclusion which emerges is that employment, output and prices are closely connected with the quantity of money in circulation especially so after the attainment of full employment and in the short period. In the monetised industrial economies which function under the motivation of maximisation of private profits, the

ture of amassing 'currency notes' becomes so powerful that money plays a decisively active role in the determination of the level of economic activity. The role of money after the attainment of full employment is particularly significant. It reveals the limitations of playing on the monetary mechanism with a view to stabilise or promote economic activity and this is particularly relevant in the context of the backward economies which often find themselves at a level of full employment at extremely low levels of productivity. In the backward economies, the advisability or otherwise of large scale deficit financing could be analysed only in the light of the Keynesian analysis with respect to employment, output and prices.

POINTS TO REMEMBER

- 1 *Keynes confined himself to only developed free enterprise economies in the short period*
- 2 *Here Keynes found that Say's law may not operate leading to a chronic under full employment because of falling marginal propensity to consume and falling marginal efficiency of capital. The result is that aggregate demand is not enough to match aggregate supply price at full employment*
- 3 *Because of the existence of unemployed resources and high mobility of factors of production, increasing money supply will increase demand money income and hence real income and employment*
- 4 *But beyond full employment real output and employment cannot be increased so increased money supply only increases prices. Multiplier dissipates itself in rising prices*
- 5 *But in this simplified picture if we incorporate sectoral full employment acceleration principle and the possibility of increasing the supply of factors to some extent beyond full employment we see that even before full employment prices may rise somewhat and even beyond full employment they may not rise in the same proportion or they may rise more than proportionately due to increased velocity of circulation of money*

SELECT READINGS

- 1 Samuelson P A *Interaction between the Multiplier Analysis and the Principle of Acceleration* *The Review of Economic Statistics* 1939
- 2 Williams John H *Deficit Spending* *American Economic Review*, February 1941
- 3 Keynes *General Theory* Ch 21



Q 5 'The Keynesian theory is a general theory of income determination. It is valid for a developed as well as an under-developed economy' Discuss. Is there a case for a separate theory for an under developed economy? (Bombay 1958)

Ans Keynesian analysis has the unique distinction of shaking the believers in the infallibility of classical economic thought out of their smug complacency. The protagonists of classical economics including Marshall and Pigou presumed that the system of *laissez faire* was the best under all circumstances and that the disturbances and dislocation caused by the ups and downs of business would automatically be set right by some 'invisible hand'. In accordance with the traditions handed down to them right from the days of Adam Smith they were firm believers in 'nature cure' for the ills of the economic organism. The ebb and flow of economic activities appeared to them nothing more than a passing phase in the eternal march of man to progress and prosperity.

The depression of the thirties delivered a sledge hammer blow to the faith of the economists and forced them to revise their thoughts entrenched in traditionalism. The leader of a fresh mode of thought which had to depart sharply off the traditional grooves into new channels turned out to be Lord J M Keynes. The basic proposition of Keynes was that there was nothing automatic in the economic mechanism which would guide man from depression to prosperity. 'Nature cure' was a remedy when there was no disease to be cured and whenever some indisposition did occur this cure went to the wall forcing the economists to think *de novo*. The Keynesian technique of economic analysis represents a certain evolution of revolutionary thought in response to the needs of a highly industrialised economy caught up in the abyss of a depression and struggling hard to get out of the morass of falling prices, dwindling profits, rising unemployment, crashing incomes and mounting miseries in the face of men and machines standing idle and economists wondering agape at the charms and marvels of classical economic analysis. Lord Keynes contended that a solution to this sad spectrum could not be found by the grand poise of the state, looking at the phenomenon in a passive, *hic et nunc* posture. He exhorted the state to undertake some definite positive measures to combat the evils, attending on the depressive phase of the economy. He advocated primarily three policy measures—(a) to keep a watch on the economy, to smell dangers around the corner before the troubles actually set in, (b) to keep a plan of public works ready for execution even with a short notice, and (c) to adopt such monetary and fiscal measures as would be of help in stabilising the economy.

The question that comes up at this juncture is about the extent to which the Keynesian mode of thought could usefully be applied for the planned development of under-developed economies. The first point to notice is the fact that *laissez faire* is no longer accepted

in any under developed area of the world as a dependable way of developing the economy Planning which was supposed to be mainly a totalitarian technique of economic development has now come to occupy a respectable place in the most vociferous of democracies Sanctification of planning in some form or the other even in capitalistic economies is the direct outcome of the Keynesian Revolution That the under developed countries of the world aspire to bring about economic growth through a planned programme of development owes as much to Keynesian thinking as to the demonstration effect of Soviet planning If the state be advised to assume some important economic responsibilities in the highly advanced industrial economies the need for state-action is all the more in the backward countries of the world which languish in a chronic shortage of private enterprise The Keynesian mode of thought is applicable to any backward area of the world in so far as the argument about the need for state action is concerned

The second proposition of the Keynesian technique is the need for keeping a vigilant watch over the economy with a view to foresee the troubles in advance In an under developed country the troubles are chronic and not occasional and hence the need is not for an *ad hoc* diagnosis but for a thorough going examination of the entire structure of the economy What is needed in an industrially advanced country is a vigilance committee to play the role of a watch dog over the possible occurrence of disturbances whereas in a backward economy the need is for a planning commission to undertake a full survey of the resources with a view to formulate a definite and detailed programme of planned development over a period of time The responsibilities aggravate in proportion to the seriousness of the problem and what looks an innocent vigilance committee in an advanced country becomes an august body saddled with the onerous burden of initiating the economic development of a country because of the situation of under developed economy crying for an immediate solution It seems therefore that the second proposition of Keynes is applicable to the situation of a backward economy on a scale much larger than the one visualised in the context of a developed country What the under developed countries need is more than a vigilance committee entrusted with much greater powers and responsibilities

So far, we are in agreement with the Keynesian technique as applied to the problems of development of an under developed economy This brings us to an area of dispute Economists differ on the applicability of the monetary and fiscal measures which Keynes advocated in the context of an industrially advanced economy entrapped in the thralldom of a depression The differences arise out of the basically different economic situation of an under developed economy in comparison with that of a developed country A developed economy in depression is not the same as an under developed economy The low level of economic activity during the

depression period of a developed economy is not attributable by any stretch of logic to the under development of human as well as physical resources. It is regarded primarily a monetary phenomenon originating from the slackness of aggregate demand which fails to absorb all the goods and services produced leading to the accumulation of unsold stocks in the market. The resources—men, machines and raw materials seem to stand in temporary disarray, waiting to be reunited on the rise of demand. Should people come into possession of adequate purchasing power, positive income elasticity of demand would automatically generate forces in the upward direction. The need therefore is supposed to be injection of adequate purchasing power into the monetary stream of the community. This could best be done by a scheme of public works which employ initially some idle labour and stimulate the private sector to further activity through the multiplier and the accelerator.

The situation of an under developed country is basically different in the sense that where there are lots and lots of unskilled workers in the over populated under developed economies and there are also unutilised and under utilised raw natural resources there is a positive and glaring deficiency of capital equipment and technical knowledge of which there is no scarcity at all during the depression period of a developed country. This makes all the difference in the world. Demand deficiency and deficiency of capital equipment and technical knowledge are certainly not identical. The latter is much more serious and more difficult to face since capital creation is far more difficult than demand generation. The difference is between basically low productive capacity and a high productive capacity constructed but not fully used. A strong well built man during his illness is certainly something different from a dwarfish weakling trying to grow out of rickety infancy.

It is therefore contended that mere creation of monetary demand would not be enough to stimulate the necessary entrepreneurial enterprise to undertake construction activity. The supply side is not easily adjustable in spite of a demand which pays. The difficulties arise out of the backward structure of an under developed economy in which there is a deficiency of savings over head facilities, entrepreneurial enterprise knowledge about resources and industrial experience in general. Consequently measures visualised for application to a developed economy in depression if applied as they are to an under developed country would generate demand which is bound to remain un-satisfied because of the non adjustability of supply. It is all likely to generate inflationary forces in the economy because of the time lag between demand and supply.

This is however no reason to believe that the under developed countries do not suffer from a general deficiency of demand. In fact, there is an overall deficiency of demand as well as supply because of the equilibrium at an extremely low level of productivity.

The chief difference between a developed economy in depression and an under-developed economy is this that in the former case, there is a shortage of aggregate demand whereas in the latter case, there is a deficiency of supply and hence of demand. In a backward economy, the brunt of the attack must fall on the supply side whereas, in a developed economy, it is the demand side which needs correction. The instruments to be employed to raise the over all productive capacity of the economy so as to increase the supplies are not the same as those to be called into operation to adjust the demand-side.

The conclusion which seems to emerge is not that the Keynesian technique is totally inapplicable to the situation of a backward economy but that something more needs to be done besides what Keynes advocated and this something more would be in the direction of building more and more production powers. Whereas a developed economy is concerned with the problem of maintenance, an under-developed economy is concerned with the problem of construction as well as maintenance of a high level of economic activity.

POINTS TO REMEMBER

1. Classical thought about the existence of an autonomous self adjusting economic mechanism unrealistic
2. There is no 'nature cure' for the economic ills of a country. Something positive and definite needs to be done to stabilise the advanced economies
3. Keynesian measures—(a) overthrow of the theory of non intervention, (b) adequate vigilance in advance, (c) public-works schemes and money and fiscal measures
4. c (1) and c (2) totally applicable to all situations and more so to the under developed countries
5. There is a controversy about c (3).
6. There is a difference between a developed economy in depression and a backward economy
7. Deficiency of aggregate demand alone is not so serious as the deficiency of aggregate demand as well as aggregate supply
8. Keynesian measures need some modification but are by and large applicable. More needs to be done to increase supplies

SELECT READINGS

1. Brahmanand, P. R. & Vakil, C N : *Planning for a Shortage Economy*
2. Brahmanand, P R & Vakil, C N : *Planning for an Expanding Economy.*
3. Kurishara : *Post-Keynesian Economy.*

Q. 6 Examine the effect of a general wage cut on the volume of employment (Delhi 1960)

Is it impossible to increase employment through a general reduction in money wages ? Give reasons for your answer

(Gauhati 1959)

Examine the dependent and independent variables of the Keynesian theory of employment Is the Keynesian system unstable ? (Gujarat 1959)

Discuss the Keynesian theory of employment (I.A.S. 1958)

"Employment is determined by aggregate demand which in turn depends on the propensity to consume and the amount of investment at a given time " Elucidate (Mysore 1957, 1955)

Ans During the pre-Keynesian era when the classical theories ruled the roost, employment was never conceived to be a serious problem. A state of full employment was thought to be normal, lapses being occasional and temporary, originating from the average frictions in the economy. It was presumed on the basis of Say's law that demand must always be equal to supply since "supply creates its own demand". Even such a keen thinker as Pigou attributed the prevalence of unemployment to the intransigence on the part of the workers which resulted in a tight wage-rigidity forcing the employers to disband some workers out of employment to save themselves from an adverse market situation. Pigou believed that full employment should be easy to establish, given a certain amount of wage elasticity in accordance with the requirements of the market. The problem of employment was examined on the basis of the marginal productivity of workers to the employers as against the marginal disutility of labour to the workers. The prevalence of involuntary unemployment was supposed to be practically non-existent excepting for a little volume of frictional unemployment which appeared during periods of temporary disequilibrium. Economists firmly believed that there would be an automatic adjustment towards full employment in spite of facts to the contrary which pointed a sharp finger to the prevalence of involuntary unemployment on a large scale. There was hardly any courage to challenge the usually accepted notions about the problem of unemployment. The intellectual boldness to re-examine the problem afresh without any preconceived notions came from the publication of Keynes' *General Theory of Employment, Interest and Money* in the year 1936.

The classical economists had made one more significant assumption in their analysis. They had assumed, as usual, that money is only a veil, a neutral thing, and as such reduction in real wages for effecting increased employment was the same thing as reduction in money wages. Keynes disagreed with this view and we shall return to it later.

According to Keynes in the short-run we can divide the economic variables coming into picture into certain given factors and independent variables and on the basis of this will follow the dependent variables of the economic system : e.g. values of different categories in the economic system e.g. national income and employment. Now the given factors may be for example the quantity and quality of population the political and social structure the tastes of consumers the scheme of values of the population (i.e. to say what actions ideas and things they think are permissible and good and which are not) productive resources of the economy and technology. Note that these factors are in any way rigid and absolutely fixed. They can undergo a change. For example the social structure of determining the population into various economic classes affects the distribution of income and it can undergo a change. But it is assumed that in the short run these things do not undergo any violent change and for all practical purposes they can be taken as given. When independent variables of the economic system are undergoing a change only dependent variables are assumed to respond and not the given factors as well.

The economic system can be looked at in terms of various categories and values and Keynes divides them into independent and dependent variables. That is to say variables that can change independently without any provocations from other variables or without any reason which can be ultimately expressed in economic terms and variables whose value is determined by the values of the independent variables. According to Keynes in the economic system following are the independent economic variables

- 1 Consumption function
- 2 Marginal efficiency of capital schedule
- 3 Liquidity preference schedule
- 4 Quantity of money and
- 5 The wage unit

Of these the first three are psychological functions based upon ideas habits and so many other factors while the fourth one is the quantity determined by the monetary authorities. The dependent variables : e.g. variables following from the interaction of the independent variables are

- 1 Rate of interest
- 2 National income output and employment
- 3 Consumption
- 4 Investment and savings etc

Talking of this distinction Keynes says 'Thus the traditional analysis is faulty because it has failed to isolate correctly the independent variables of the system. Saving and investment are the

determinates of the system, not the determinants. They are the twin results of the system's determinants viz., the propensity to consume, the schedule of marginal efficiency of capital, and the rate of interest. (These determinants are, indeed, themselves complex and each is capable of being affected by prospective changes in the others.) But they remain independent in the sense that their values cannot be inferred from one another."¹ In the above quotation, however, Keynes makes the mistake of treating interest as an independent variable which it is not. Thus he himself says that "the rate of interest depends partly on the state of liquidity preference (i.e. on the liquidity function) and partly on the quantity of money measured in terms of wage units."²

Before proceeding further we must note that the "division of determinants of the economic system into the two groups of given factors and independent variables is, of course, quite arbitrary. The division must be based entirely on the basis of experience, so as to correspond on the one hand to the factors in which the changes seem to be so slow or so little relevant as to have only a small and comparatively negligible short term influence on our *quaesitum*, and on the other hand to those factors in which the changes are found in practice to exercise a dominant influence on our *quaesitum*".³ However given the basis of divisions we can extend our inquiry and say that whole of the economic system is determined by the three psychological functions the wage unit and money supply. The wage unit is determined by the bargains between the employers and the workers and is the amount of money per unit of labour employed. The value of the wage unit will enable us to measure national income, employment giving investment output etc in real terms because the effect of price changes will be eliminated. In such a case increase in real employment and output will mean almost the same thing as one will imply the other.

Taking the liquidity preference function and the money supply as measured in terms of the wage unit we get real rate of interest. According to Keynes investment is highly interest elastic and therefore, changes in money supply or the liquidity preference schedule of the people will be able to bring about a change in investment and hence income and employment. However, investment is not only determined by the rate of interest but is equally influenced by the marginal efficiency of capital again measured in terms of wage units. Marginal efficiency of capital is the expected yield on investment and therefore investment will be made so long as it is higher than the rate of interest. Consumption function in its turn determines the amount of consumption that will be made out of any

1 Keynes—*General Theory* p. 183

2 *Ibid* p. 246

3 *Ibid*, p. 247.

given income and shows changes in consumption following changes in income

With these independent variables Keynes weaves whole net of the economic functioning of a society. Out of a given income consumption function determines the consumption and with given liquidity preference schedule and money supply the rate of interest is determined which in conjunction with the marginal efficiency of capital gives us investment. The sum of investment and consumption gives us income. At the same time income generated by investment or consumption expenditure does not stop there it generates a multiplier effect dependent upon the marginal propensity to consume and thus in turn influence the various independent variables. But this reaction of changes in income output and employment etc upon independent variables cannot be ascertained precisely as regards its direction and magnitude. We can only make guesses based upon our observations. These independent determinants of the system are influenced by the dependent variables but not solely determined by them or only in a particular fashion. The actual economy is quite complex and the above presentation is a simpl account of the actuality but nevertheless these seem to be the factors which it is useful and convenient to isolate.

Such a system as visualized by Keynes can be stable only if the independent variables in the system behave in a harmonious manner. The multiplier should be greater than unity but not very large because otherwise if the multiplier is equal to one huge investments will be required to maintain the economy at a high level of income and on the other hand if the multiplier is very large even small investments will have an explosive effect. Therefore the value of the multiplier should be a moderate one but greater than unity. Investment should be interest elastic but should not be very sensitive to even moderate changes in interest rates. Changes in investment due to multiplier effect are likely to lead to much larger increases in income and hence investment has to be kept at a fairly stable rate. Further increasing income and investment should lead to reduced marginal propensity to consume and marginal efficiency of capital while the opposite should happen when income and investment are reduced. This is necessary to check the economy from either getting pushed up indefinitely or sliding down unchecked.

But as it happens the values of different psychological functions happen to be such that the economy does experience a chronic tendency towards under-full employment and a tendency to fluctuate between very low level of employment and a stage near full employment. This happens because of falling marginal propensity to consume and falling marginal efficiency of capital as income and investment rise.

Following from this it was but natural that Keynes should have quarrelled with the classical economists regarding the way in which

employment can be increased. We have seen that according to the classical economists money is neutral. Keynes also eliminates the effect of price changes in his calculation but he does not disregard their effect on income and employment) and also ultimately real wage rate is equal to the marginal productivity of labour and also equal to the marginal disutility of labour. Hence if employment is to be increased real wages are to be reduced. Keynes, since he also analyzes the whole thing in terms of wage units, arrives at the conclusion that under given circumstances the economy will be employing the maximum number of workers which at the going real wage rate can be employed i.e. which the economy can afford to employ in terms of labour productivity. Hence according to Keynes also, if employment is to be increased real wages should fall.

The conflict arises regarding the mechanism of effecting this reduction in real wage rate. The demand for factors of production is derived from the productivity of factors translated in their market valuation. According to the classical school the introduction of money into the picture made no difference to the calculations. Reduction of real wages could be effected by reduction of money wages. They based their analysis on the assumption that '(a) the price level is unchanged (b) that aggregate money demand (MV) is unchanged or (c) that component of aggregate money demand, e.g., non wage earners expenditure is unchanged'.¹ Clearly if profits are increased in either of these ways: e.g. by reducing cost with given price level or by reducing costs and keeping the total sales proceeds constant or by reducing the share of wage income in the total, it will lead to increased investment and employment.

Keynes pointed out certain basic fallacies in this approach.² He says that the above analysis is true if we consider any single enterprise. There we can say that the price level or aggregate sale proceeds can be assumed as given in the face of reduced money wages but it is wrong to extend this reasoning to the economy as a whole. "Money wage rate-changes are double edged. They change money costs but they change at the same time money incomes and hence money expenditures. Even the money expenditures of non wage earners can not be assumed unchanged if their incomes depend in part on the expenditures of wage earners."³ A general reduction in money wages, therefore according to Keynes was not going to increase total employment because total employment depended upon aggregate supply schedule and aggregate demand schedule and reducing money wage in general means reducing effective demand and hence aggregate demand schedule. In brief Keynes points out that "whilst no one would wish to deny the proposition that a reduction in money wages accompanied by the same aggregate effective demand as before will be

1 Harris (Seymour E) *The New Economics*, pp 572-3

2 Keynes *General Theory* p 239

3 Harris (Seymour E) *The New Economics*, p 573

associated with an increase in employment, the precise question at issue is whether the reduction in money wages will or will not be accompanied by the same aggregate effective demand as before measured in money.¹

Thus briefly Keynesian argument was that if we reduce money wages in order to increase employment we shall be defeating our own ends because reduced money wages will lead to reduced aggregate demand and reduced prices leading to non increment of profitability of investment. The result would be no increase in investment and employment and at the same time due to reduced prices no reduction in real wages. We cannot reduce real wages by the mechanism of reduction of money wages howsoever hard we may try. Further there is another difficulty. The workers are under what Keynes calls money illusion i.e. to say they are more concerned with given money wages than with given real wages. They are not ready to forego an upward revision of money wage rate every time prices register a small increase but they are very sensitive to changes in money wages. This money illusion can be taken advantage of by reducing real wages by increasing aggregate effective demand and prices and thus increasing employment. Thus aggregate effective demand may be increased by consumption or investment expenditure. Moreover it is not possible to effect a uniform wage cut throughout the economy by any decree. That can be done only in a totalitarian economy and not in a free market economy. Here the reduction in money wage rates will have to be at uneven pace and at uneven rate in different industries leading to all sorts of complications.

Keynes further points out that it is better to increase employment without touching money wage rates. Reduction of money wage rates apart from reducing aggregate money demand and prices may be said to have a healthy effect on investment through reduced demand for money and hence reduced rate of interest. But this doubtful reduction in the interest rate may be more than compensated by reduced marginal efficiency of capital. All told therefore it is advisable not to touch money wage rates for increasing employment.

In the over populated under developed economies the problem of unemployment, under employment open as well as disguised is far more serious than the problem in the advanced industrialised economies which have come to regard the question of establishing full employment as nothing more than stimulating the propensity to consume and the propensity to invest so as to compensate sufficiently for the deficiencies of aggregate demand. In the backward over populated countries the problem is basically one of a disproportionality in the factors of production and mainly it is in the nature of too much of labour trying to find employment with too little of capital. There is a chronic scarcity of enterprise and often there is a deficiency of land as well as is seen by the scramble for a footing in agriculture.

The problem of unemployment and the problem of economic development appear to be largely synonymous in the case of backward economies productivity of labour employed is an equally serious problem since backward techniques with low productivity can always create large volume of employment without making any substantial addition to income

POINTS TO REMEMBER

- 1 *The classical theory of employment was based on marginal productivity theory of wages and the equality of marginal utility of wage with marginal disutility of labour together with assumptions of competition, mobility etc.*
- 2 *They assumed the neutrality of money and thus reached the conclusion that the economy will be having full employment with the absence of involuntary unemployment*
- 3 *Keynes divides the problem into given factors and independent variables giving us as the result, dependent variables. The given factors seldom change, the independent variables are not derived from others and are the three psychological functions, the money supply and the wage unit, while the dependent variables are income, employment, saving, investment etc in the economy. The division above is not a rigid one. The classical economists did not have to make the division at all.*
- 4 *On the basis of independent variables Keynes weaves the economic structure of the economy. Such an economy is stable if the independent variables behave in a harmonious manner, which they do not.*
- 5 *Both the classical and Keynesian economists agree that to increase employment, real wage rate is to be reduced but the controversy is over the mechanism of it. The assumptions of classical economists enabled them to say that reduced money wages will increase employment, while the Keynesian approach dictated otherwise. According to him reduced money wages meant reduced demand prices and hence same or higher real wages. Real wages should be reduced through increased prices by incurring more of consumption and investment expenditure.*
- 6 *On the one hand workers under the "money illusion" will oppose revision of money wages though not so much the rise of prices, and on the other hand reducing money wages in a uniform way is impossible.*

ELECT READINGS

- 1 *Keynes J M General Theory Chs 18 and 19*
- 2 *Harris Seymour E The New Economics Ch XL (Money Wage Rate and Employment by James Tobin), Ch XXXIX (Effective Demand and Employment by Arthur Smithies), Ch XVII (Public Policy—the Doctrine of Full Employment by D B Copland)*
- 3 *A E A—Readings in Monetary Theory Ch 13 (Price Flexibility and Full Employment by Don Patinkin—from the American Economic Review, 1948).*

Q 7 Keynes' General Theory transformed Economics into a theory of output and employment as a whole Elaborate
(Bombay 1959)

Show how the total output and employment in a country depends upon marginal propensity to consume, the marginal efficiency of capital and the market rate of interest
(Gauhati 1959)

To what extent, and in what manner can the Keynesian analysis of the determination of income in the short period be used to explain changes in income over time ?
(Calcutta 1957)

Examine the interrelation between saving, investment and employment
(I A S 1957)

Ans *The General Theory of Employment Interest and Money* appeared in the year 1936 primarily as a challenge to the then universally accepted doctrines of the classical economists who postulated progress to be natural and automatic excepting for occasional lapses for brief periods of time due to some incidental maladjustments. The essay on examining the validity of the classical postulates in the light of the role played by employment, interest and money in point of objective reality turned out to be a general theory of investment employment and output as a whole especially so over short periods of time under the conditions of a free society. The revolution in thought was achieved by a sharp turn of attention to the facts of the empirical situation away from the soothing assumptions of the classical economists who relied heavily on the strength of deductive reasoning on the basis of certain premises that were drawn arbitrarily from perhaps the characteristics of the early phase of the Industrial Revolution. The departure is wrought from a change over to a critical examination of empirical data and objective evaluation of the postulates of the classical economists. In this process there emerges a new theory regarding the growth of income and employment in the context of the conditions of an advanced economy temporarily experiencing a state of stagnation. The general theory is general only to the extent that it could cover all similar cases of advanced economies in a state of temporary depression. The precise point which comes up at this juncture is how far the generality of the theory could be stretched further to explain the phenomenon of under development of a major part of the world. In other words can we use the Keynesian theory to understand the problems of economic backwardness and suggest measures for development ?

With the triumph of Ricardian approach in economics and with the acceptance of the view by a majority of the economists that a general deficiency of effective demand is not possible the problem of production was increasingly pushed out of the picture. The British economists after Ricardo by and large engaged themselves with the problem of allocation of given resources into different employments

in conformity with the demand for various commodities and services. They believed in Say's Law of Markets according to which supply creates its own demand. The problem in such a case was not to create demand so that the supply could be sold out, but only to adjust supply and demand patterns in such a way as would make them fit together. We find that with the triumph of Ricardians in the controversy between Ricardo and Malthus regarding the possibility of a general glut in the market, the question of growth of the productive resources was also lost sight of. Partly this may be due to the reason that Britain was experiencing a rapid rate of growth during 19th century and therefore the problem of the growth of productive resources was not engaging the attention of the British economists, and partly this may be explained by the fact that economists from all countries were rather overshadowed by the British. In Germany, for example economists of the stature of List were emphasizing the developmental aspects of an economy as against the stagnant reallocation problems of productive resources, but they were able to make little headway as subjects of absorbing interest in the academic circles. Even with the emergence of Marginal Utility School (which by emphasizing consumption side should have been in the forefront in emphasizing the possibility of deficiency of effective demand) problem of effective demand was ignored and only the scarcity aspect of economies was emphasized.

Keynes, however, was not the first to take up the view that there may not be sufficient demand for the supply put in the market but he was probably most brilliant expositor of the fact that an artificial scarcity of goods and services may arise due to the deficiency of effective demand. The economy may be fully equipped with all productive resources to feed all its sectors adequately but its working may be paralysed by the inactiveness of some motive forces in the economy. Keynes had the added score over others in so far as he was emphasizing that psychological non economic forces are really responsible for defective working of a modern capitalist economy.

Keynes, in his *Treatise on Money* was trying to explain the determination of prices of consumption goods and capital goods, but in the *General Theory* he had set himself quite a different task. He wanted to ascertain what determined output and employment in an economy and whether the forces determining them could in any way be artificially influenced or controlled. "This book (i.e., the *General Theory*) on the other hand, has evolved into what is primarily a study of the forces which determine changes in the scale of output and employment as a whole and whilst it is found that money enters into the economic scheme in an essential and peculiar manner, technical monetary detail falls into the background" (*General Theory* Preface p. vii). For this task, we must remember, he confined himself only to a developed, free enterprise economy, with a developed investment, and financial market. Actually, he wanted to

ascertain the causes because of which a developed capitalist economy failed to work efficiently and give employment and output to the extent it was capable of doing. It was for this reason that he analysed the problem of determination of output and employment in the short period during which the problem of the supply of productive resources did not arise also during a short period with given productive resources and technology increased real employment would mean increased real output and vice versa. As therefore he assumed that increased output or employment would mean the same thing as far as his analysis was concerned. Also in order to eliminate the differences between monetary and real values of employment and output he measured employment output etc in terms of wage goods. This adoption of the wage goods as the units of measurement was a major step which turned economic analysis into one of the determination of real employment and output, by eliminating all the effects of prices in the expression of economic quantities.

Keynes for explaining the determination of income output and employment in an economy took up some simple propositions e.g. the expenditure of one is the income of the other greater consumption expenditure or investment expenditure means greater demand and similarly greater savings means reduced demand. His problem boiled down to the question as to what determines consumption and investment expenditures which in turn will determine the income and employment of the community. For this he came to the conclusion that ultimately there are three non economic psychological functions which together with the quantity of money determine all the quantities in the economy. The three functions are (1) Marginal Propensity to Consume (MPC) (2) Marginal Efficiency of Capital (MEC) and (3) Liquidity Preference. The fourth non functional determinant is the quantity of money.

To explain in brief people are slow in changing their consumption habits with the result that if income changes consumption fails to adjust itself instantaneously to that change. As a result with rising incomes increases in consumption fail to keep pace and with falling incomes consumption fails to fall as rapidly. In other words MPC, which is defined as change in consumption/change in income, falls with rising incomes and rises with falling incomes. Keynes also points out that in developed economies with the growth of the big corporations, the tendency to save a greater portion out of increased income becomes still more pronounced. Since total demand and hence total expenditure and income is determined by consumption and investment expenditure it is clear from one side (i.e. consumption side) there arises a hindrance in the maintenance of increased income.

Investment expenditure according to Keynes is determined by the rate of interest and marginal efficiency of capital (MEC). MEC is nothing but the expected future returns on investment and naturally

these expectations are influenced by a number of causes including the present state of demand. However given this MEC investment will be determined by the rate of interest which has to be paid on the money borrowed for investment. Rate of interest is determined by what he calls the liquidity preference ϵ , demand for money for transactionary, precautionary and speculative purposes.

Since $Y = C + I$ (where Y is income, C consumption and I investment) therefore to change Y either C or I or both must be changed. Now consumption out of a given Y is determined by a number of economic and non-economic factors and changes in it will depend upon the MPC. MPC is nothing but $I - \text{Marginal Propensity to Save (MPS)}$ because all that is not consumed out of additional income must be saved. Therefore when we increase Y total expenditure is increased care has to be taken that to maintain that income the increasing gap between normally increased consumption and income is fulfilled by additional investment or by additional consumption. Keynes here suggests that we may redistribute our national income in favour of working classes which are likely to have higher MPC or we may generate still additional expenditure and consumption demand by means of unemployment relief doles or similar methods. On the other hand if the gap is to be filled by increasing investment then we must either raise MEC or lower rate of interest. MEC is a thing based upon the expectations of the investors which may be influenced to some extent by certain steps but there is no guarantee as to the efficacy of such steps. If MEC rises investment will increase but if it does not investment will not increase. However Keynes believes that interest is highly interest-elastic and through this end it should be easier to influence investment decisions. Given the liquidity preference rate of interest can be lowered by increasing the supply of money which in turn will increase investment and income and employment. The classical economists were under the belief that savings were also interest-elastic so that if the monetary authorities tried to reduce rate of interest increased investments are likely to be counteracted by reduced savings. Such a logic no doubt ruled out the possibility of a decline in income but it is in no way proved that the economy was going to attain full employment position (unless the analysis was aided by other assumptions) or that it was possible to raise employment and income in the economy through manipulation of the rate of interest. Keynes on the other hand maintained that while savings were interest-inelastic and were determined by considerations like provision for old age, family considerations, social prestige etc. investment was highly interest elastic.

However there were two main hindrances in increasing investment through reduction of interest rates. Firstly interest rates are sticky, people have certain notions regarding what should be the maximum and minimum normal rates of interest and therefore if rate of interest approaches one of these normal limits, they start

expecting it to change and in anticipation of it they change their demand for money with the result that with given supply of money rate of interest *does* change in the expected direction. It was for this reason that rate of interest could not be lowered indefinitely. Secondly when interest rate had already been lowered sufficiently, increasing investment by *further* reduction in that rate became increasingly more difficult. Moreover with increasing investment (with given productive resources in the short period) possibilities of further profitable investment decreased leading to reduced MEC.

Thus the result of all this was a peculiar interaction between saving (or consumption) investment and employment and income. Income and employment could be increased and maintained by higher expenditures on consumption and investment. But with rising income and with distribution of income more and more in favour of non wage incomes, MPC falls and this fall in MPC coincides with fall in MEC after a certain stage. Thus while on the one side, the multiplier action generated by increased investment and consumption expenditure helps to bring the economy quickly to the full employment level, on the other hand falling MPC and MEC drag the economy down again, forcing it to remain at less than full employment level.

All this analysis however, is limited to the problem of short-period only. Therefore if we are concerned with short period problems Keynesian analysis is an excellent method of finding out how income over this period is likely to change. But the problem is not one of developed economies only where the main question is of keeping the existing productive resources fully employed. The real economic problem of the world today is to see how economies grow and expand over years and decides to analyse the forces responsible for this long term economic development and changes in income and to make use of this analysis for helping in the growth of under-developed economies. Here Keynesian analysis is helpless since it cannot deal with the peculiar problems arising out of the immobility and shortage of productive resources with socio political forces which inhibit the growth of the economy and with the absence of organised sensitive money and financial markets.

There is a basic difference between the questions taken up by the Keynesian school of thought and the problems of economic growth over a long period of time especially so if one has in mind the growth problems of the under developed economies of the world. The Harrod-Domar model of growth is an attempt to apply the Keynesian model of growth of income over a long period of time. In the advanced economies the actual rate of growth is apprehended to exceed the warranted rate of growth resulting in a deficiency of aggregate demand. There is always the fear of over production leading to a depression and this is exactly the Keynesian question of the short period. They want to regulate the natural rate of growth to the

warranted rate of growth in order to avoid the pit-falls originating from the accumulation of excess of capital ! Accelerated depreciation of capital is supposed to be one of the solutions perhaps to raise the marginal efficiency of capital ! As one moves on from the short period to the long period, one has to move on to think of not only the growth of income but also the growth of capital and the relationship between the two the MPC the MEC and the propensity to invest The principal variables in the Harrod Domar model of growth appear to be the same as those of Keynes as applied to the secular period

Coming to the backward economies of the world, we find there are significant structural differences Here the aggregate deficiency of demand arises out of the low levels of income and not because of the low MPC The low MEC may be due to the high cost structure and also low levels of demand owing to lack of over head facilities The rate of investment is low because of the vicious circle of poverty leading to a low rate of savings and investment All this goes to prove that the Keynesian mode of thinking can give significant clues to the line of reasoning to be followed in analysing the problems of growth over a long period of time

POINTS TO REMEMBER

- 1 *The triumph of Ricardians over Malthusians led to consideration of only allocation of productive resources as the economic problem and not the growth of productive resources*
- 2 *Keynes though not the first to think of effective demand, put it in its proper place*
- 3 *Keynes shifted from Treatise to the General Theory, from analysis of price determination to that of output and employment For this he made use of the concept of wage goods*
- 4 *Keynesian theory runs in terms of MPC, MEC, Liquidity Preference and the Quantity of Money*
- 5 *MPC falls with rising incomes and rises with falling incomes and thus hinders the attainment and maintenance of full employment*
- 6 *MEC together with interest rate determines investment*
- 7 *For increasing and maintaining Y C and I have to be increased C is not interest elastic while I is To the classical economists both C and I were interest elastic so change in one was always counteracted by a change in the other*
- 8 *But there are obstacles in using the interest elasticity for increasing investment in the form of stickiness of interest rates and reduced possibility of lowering interest rates beyond a limit Also MEC falls with raising investment*
- 9 *As a result of interaction of saving, investment etc the economy tends to remain at less than full employment position*

SELECT READINGS

1. Keynes *General Theory*
2. Hansen *Guide to Keynes*.
3. Wilson *Fluctuations in Income and Employment*
4. Klein *Keynesian Revolution*
5. Harris, Reymour R. (ed.). *The New Economics*, Ch XXXII, XXXIII

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Q 8. "The introduction of Keynes' consumption function into the theory of acceleration enabled economists to explain the turning points of general economic activity without resorting to limiting factors" Discuss
 (Karnatak 1960)

Show how Keynes' theory of consumption tends to encourage radical policies while his theory of investment tends to encourage conservative policies
 (Bombay 1959)

Explain the doctrine of consumption function and show how this doctrine occupies a pivotal position in Keynes' analysis
 (Karnatak 1959)

Examine the uses of "propensity to consume" in the Keynesian macro economic process
 (Mysore 1959)

What do you think of the consumption function as a tool in economic analysis?
 (Punjab 1959)

Why is the propensity to consume considered one of the strategic relationships affecting the behaviour of an economy? What significance would you attach to the concept of the optimum propensity to consume?
 (Delhi 1957)

Ans It is by no means a simple job to get a coherent and synthetic view of the web of economic relations in a highly complex exchange economy which hinges by and large around the pivot of the role of money. It is all the more difficult to pick up the right threads from the inter twining tangle of relations in order to be able to diagnose a certain phenomenon right up to its roots. This task has been well done in the Keynesian analysis of the consumption function on a purely scientific basis. It was held for long with the fervour of an unquestionable conviction that keeping consumption to the irreducible minimum was the greatest of puritanic virtues. Nobody thought for a moment about the series of chain reactions which would inevitably ensue from holding consumption at a dead level of austerity. The entire question of the function of consumption in a capitalist society was taken up *de novo* by the Keynesian school of thought and made subject to a critical unbiased scientific examination which resulted in the Keynesian theory of the consumption function.

Keynes, in his analysis of the determination of employment, income and output ultimately comes to the conclusion that the determination of whole economic system can be analysed in terms of three non-economic psychological functions viz (1) consumption function (2) investment function (3) liquidity preference function together with the fourth entity, quantity of money. Naturally consumption function plays a pivotal role in the Keynesian analysis and deserves accordingly a careful detailed consideration. We must distinguish here between consumption function and marginal propensity to consume [MPC]. Consumption function is a schedule showing various amounts of consumption at different levels of income. We can draw a graph of this consumption function giving us a consumption function curve. Algebraically consumption function will be written as $C=f(y)$ where C stands for consumption and y for income. On the other hand if we try to find out the value of consumption function at any particular level of income, we are able to get what is called average propensity to consume which algebraically may be written c/y while MPC shows only the rate at which consumption at the margin changes when income changes

and is accordingly written as $\frac{\Delta c}{\Delta y}$.

According to the classical economists consumption is determined by the rate of interest. Given income with rising interest rates savings will increase and consumption will fall and *vice versa* with falling interest rates. To the classical economists savings were interest elastic and all savings were made with the sole purpose of investment. Rate of interest therefore equated savings and investment and there was absolutely no place of idle savings or hoardings. They were using the concept of marginal utility of interest earned on lending one's savings with the disutility of doing those savings [or a similar version of the supply side in terms of disutility of waiting etc]. If at any time savings and investment were not equated by the prevailing rate of interest it would have to undergo a change to equalize the two. But the difficulty with this approach was that no mechanism was provided by which fluctuations in income and employment could be explained. All deficiencies in effective demand arising out of savings would be exactly made up by investment. Because of this not only the changes in income level could not be explained the determination of absolute level of income also defied analysis. The main reason for such a glaring defect to persist in classical economics was that their main task was the theory of value or exchange and not the theory of income and output. To Keynes the task of analyzing the determination of income and output was really important and so in him we find quite a different approach.

It is significant to note that Mr. Keynes' consumption does not get as prominent a place in his *Treatise* as in the *General Theory*. The reason is that there he was mainly concerned with the determination of price levels of consumption goods and capital goods but

in the *General Theory* his task was to analyze the determination of income and employment in real terms. And he found his analysis on some simple propositions that

$$Y = C + I$$

$$\text{and } Y = C + S$$

Thus whether Y was considered from the receipt side or expenditure side consumption attained an important place and naturally he busied himself with the causes that determine consumption. As pointed out the classical economists believed in the interest elasticity of savings but Keynes did not. To him consumption function was determined by various other factors e.g. social status, provision against future needs and unforeseen contingencies etc. So while according to the classical economists no savings could have taken place at zero or negative interest rates according to Keynes this possibility was there provided future needs were strong enough. Further since savings were made not for interest earning, hoardings were possible.

Keynes used the concept of MPC to give his famous theory of multiplier—a modification of Kahn's employment multiplier. Multiplier is the number of times by which income increases as a result of a given injection of purchasing power in the economy. For example, if as a result of injection of purchasing power of Rs 100 in the economy total increase in income experienced by different people is Rs 300 then the multiplier is $300/100 = 3$. The value of multiplier depends upon the value of MPC. Multiplier action takes place because expenditure of one is the income of the other and the moment an expenditure is made income rises by an equal amount and when that income is re-spent by its recipient income rises further by an amount equal to the new expenditure. Algebraically,

multiplier = $\frac{1}{1-MPC}$ so that if the recipient of the first injection of purchasing power does not spend any portion of his income but saves all of it then the total increase in income of the community is equal to the amount which this person received. Here therefore, the multiplier is equal to one $\left[= \frac{1}{1-0} \right]$. On the other hand if any recipient of additional income goes on spending $\frac{1}{2}$ of the additional receipts, the total increase in income as a result of the injection of one unit of purchasing power will be

$$= 1 + \frac{1}{2} + \left(\frac{1}{2}\right)^2 + \left(\frac{1}{2}\right)^3 + \dots = \frac{1}{1-\frac{1}{2}} = 10$$

We find that multiplier has a minimum value of one and can rise to ∞ if MPC happens to be unity. In practice however multiplier lies at a sufficiently low figure, say between 3 to 10.

While Keynes made use of the multiplier concept to show how with an initial injection of investment, income will rise by a multiple of it, and how successive savings by successive recipients of increased income will get equated to initial investment, other economists especially Prof Samuelson and Prof Hicks made use of the concept in the explanation of trade cycles. Prof. Harrod had given the concept of what is called the Super multiplier or the Relation or Accelerator i.e. investment induced as a result of increased demand is a multiple of increased demand depending upon the capital output ratio. Prof Samuelson had found out how with varying values of multiplier and accelerator we could get varying patterns of fluctuations in income and employment in the economy. Prof Hicks went still further. He made elaborate use of the time lags. He pointed out that Keynesian multiplier was theoretical multiplier and showed only the end result in terms of income while in reality we must recognize the fact that there are time lags in the working of the multiplier and it is possible that before multiplier works itself out, changes in investment etc. may take place stimulating or obstructing the movement in the income of the economy towards a particular direction. On this basis Prof Hicks gave us an elaborate theory of trade cycles which explained turning points with the help of interaction between multiplier and acceleration.

To go into greater details we say that the multiplier action starts when people get more income and spend a part of it. Now if the MPC is not equal to one and if only once over injection of new purchasing power is made increase in community's income as compared with base period will gradually decrease till it is back at its original level when all the additional purchasing power has been saved. If increased demand as a result of increased income cannot be met out of existing employment of productive resources, new investment will have to be made. In other words we can say that multiplier action takes place when there is excess capacity and acceleration takes place when there is full employment in the industry in question. This acceleration process by making further investment creates excess capacity and allows the multiplier (further stimulated by its own action in investment) to work further in terms of increasing real income and employment and leads to a rise in the value of multiplier. Here the concept of optimum propensity to consume comes into picture. Since consumption out of income is determined by the propensity to consume and since consumption and investment go to make up Y it is necessary for the stability of the economy that people should have a particular propensity to consume which is in conformity with the values of other functions viz., investment function and liquidity preference function. Prof. Lange explains the concept of optimum propensity to consume by pointing out that we should think of consumption function, investment function, liquidity preference function and the constant, quantity of money, simultaneously in order to find out how all of

them can be in mutual balance. A change in any one of them will lead to an all round disturbance. But given the three functions and the quantity of money an optimum propensity to consume can be found out which will keep the economy in equilibrium. The values of Y , C and I should be so determined that $Y = C + I$ and since C is a function of Y and I is partly a function of C , C must be such as maintains the equality between Y and $(C + I)$. If the propensity to consume is not such this equality cannot be maintained and hence the economy cannot remain stable.

Keynes makes use of this consumption function for policy prescription also for he believes that MPC falls with rising incomes. Thus real income and employment goes on increasing so long as there is excess capacity or so long as excess capacity has been created by new investment through acceleration process. But then as Prof. Hicks explains there is a limit to the increase of real resources in the economy in a given time and therefore the economy finds it impossible to increase its resources as quickly as ever increasing speed of multiplier acceleration process would demand. The result is that the economy hits the full employment ceiling and acceleration process starts working downwards. Multiplier follows suit because reduced expenditure at one point will mean reduction of expenditure at all further points and as a result of this falling demand acceleration process works downwards with still greater force. The process halts because investment cannot be reduced at a rate more than the depreciation rate and the autonomous investment goes on taking place so that after sometime again demand picks up and the multiplier action starts working upwards.

Thus we see that when we make use of consumption function through its manifestation in multiplier process together with acceleration process we can explain the turning points of the trade cycles quite logically. Further our explanation gets strengthened if we allow for the fact that with the rising incomes MPC falls and leads to a fall in the value of the multiplier while with falling incomes MPC rises because our consumption habits are set and cannot change as rapidly as our income can. Also businessmen experience much wider fluctuations in their incomes than ordinary workers but they cannot afford to change their consumption standards unless they are sure that the income change is permanent. Again, with rising big corporations and joint stock companies the portion of savings out of their income is increasing rapidly as their income rises. Some studies in U.S.A. have indicated that consumption as a proportion of income has remained constant for about two decades. But this means that average propensity to consume has remained constant. What Keynes was concerned with was changes in MPC over a short period and here he was right that with rising income MPC falls.

Now this falling MPC together with falling MEC prevents the economy from attaining or maintaining full employment position. In order therefore to check the emergence of deficiency of effective demand Keynes suggested that steps should be taken to increase consumption and investment. Some people are of the view that Keynesian suggestions were radical as far as consumption portion goes but they were quite conservative when he came to the investment portion. Actually this is not fully true. One should say that some of the suggestions in the investment portion also were quite radical and uncapitalistic. However in the consumption portion his prescription was quite novel different from the usual socialist and underconsumptionist thinking which emphasizes only redistribution of income. Keynes believed that we should artificially inject new purchasing power in the economy even if this was done without any productive work done in return by the recipients of this purchasing power. Redistribution of income in favour of wage income would help but only within limits. Better still would be to create additional purchasing power through deficit financing etc and use it for redistribution amongst the working classes through public works programmes. Curiously enough he did not suggest investment in long term productive projects because he was dealing with economies where problem of capital formation was not there. Increased purchasing power by increasing demand would automatically set the existing excess productive capacity of the economy into motion and would increase income employment and output. For this reason therefore he was not very particular whether new purchasing power was going to those who did any useful work in return for it. Unemployment relief and doles may be ethically objectionable but not economically. Or if a more dignified method of giving doles was to be chosen ditches could be dug and filled and wages paid for them.

However on the investment side Keynes was more conservative in suggestions because of his belief in interest elasticity of investment. Classical economists also had believed in the interest elasticity of demand for investment. But Keynes was also fully emphasizing MEC which in the time of need just did fall and decreased investment. For instance during a depression what is required is more investment so that with greater demand increased investment should turn out to be more profitable but MEC or expected yields are low in the minds of investors with the result that they curtail their investment plans further leading to still greater depression. Keynes was making a conservative suggestion that a reduced rate of interest would help in the revival of investment activity but he was also fully aware of the fact that investment may not increase simply by lowering interest rates. MEC was equally important. Government may try to convince the investors that greater investment would mean greater profits for all but it may not succeed. In such a case the Government is asked to start direct investment in public

works programmes, which would be in the nature of increasing consumption demand leading to increased MEC. Thus we may say in a mild tone that Keynesian suggestion on the consumption side were quite radical, while on the investment side he tried to influence investment through changes in the rate of interest and consumption in the sense that the suggestion of public works programmes was also nothing but attacking the problem from the consumption side.

POINTS TO REMEMBER

- 1 Consumption function is one of the four ultimate determinants of Keynesian system. In consumption we must maintain the distinction between the consumption function as such and MPC.
- 2 In the classical scheme, hoarding had no place and consumption was thus interest elastic. In Keynes it is not interest elastic.
- 3 Keynes used consumption function to give us the concept of multiplier which = $\frac{I}{I-MPC}$. The value of multiplier ranges from one to ∞ .
- 4 Prof. Harrod gave us the principle of acceleration. Prof. Samuelson and Hicks made use of the interaction between multiplier and acceleration to give us explanations of trade cycle. Prof. Hicks specially made use of time lags and distinction between induced and autonomous investment to give a clearer explanation.
- 5 MPC falls as income rises—though average propensity to consume may remain the same over long period. So Keynes makes radical suggestions for increasing consumption demand by means of unemployment benefits, doles, etc.
- 6 On the investment side, Keynes would prefer that interest manipulation should suffice to create sufficient new investment. But if it does not he would suggest public works programmes to induce greater consumption demand and hence investment.

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Q. 9 Trace the effect of investment on employment and output.
(Delhi 1960)

What are the causes of the changes in the volume of investment ?
How do these changes affect employment and economic activity ?
(Rajasthan 1959)

Explain how the rate of interest affects investment
(WBSCS 1958)

Analyse the main factors that are likely to influence the investment demand schedule in an economy and give in this connection your views about the interest elasticity of investment. (Delhi 1958)

Examine the Keynesian theory of investment with particular reference to the influence of the rate of interest (Gujarat 1958)

Examine the grounds for, and the implications of, the statement that "the marginal efficiency of investment is not independent of the level of income as of changes in income" (Calcutta 1957)

What are the arguments that can be advanced for and against the following propositions

(a) Investment is a function of the level of output rather than of the rate of growth of output ,

(b) Investment plans are affected by supply of finance and restraining from consumption provides the finance ? (Delhi 1957)

"The marginal efficiency of capital in conjunction with the rate of interest determines the amount of new investment" Discuss
(Mysore 1956)

Ans What determines the volume of investment per unit of time in a given economy is a question of the greatest significance in view of the importance of investment from the angle of stability and progress. The under developed economies in particular are deeply concerned with the factors that determine the total volume of investment because their very existence depends on the execution of effective measures to promote the total investment in their areas. The advanced economies, perhaps look upon investment not only as a means of promoting economic development but also as a means of stabilising or destabilising the sum total of economic activity. (The Keynesian analysis of the role of investment in the context of the advanced economies of the world is more concerned with the problem of stabilising the economies at a high level of production and consumption rather than with the question of raising the backward economies from the grass roots through the process of unfailing regularity of investment) All the same, the Keynesian analysis throws a good deal of light on the general theoretical aspects which explain the process of investment.

Investment plays a vital role in the Keynesian theory of income and employment. Investment expenditure is not only a major

constituent of income [Y] but also is the quantity through which expectations of the entrepreneurs are expressed in real terms. Total income $Y = C$ [Consumption] + I [Investment] and changes in either C or I bring corresponding changes in Y . It was but natural that Keynes should have given so much prominence to investment because with a change in investment multiplier action comes into being leading to a multifold change in income over a certain period of time. However in order to understand fully the role of investment and to find out its full effect on income and employment of the economy it is necessary to analyse the causes which determine this investment.

By investment Keynes would mean new investment, when prices of shares etc are rising so that by changing hands in the market original investment now shows a higher monetary value. Investment should not be taken to have risen correspondingly. Investment is to be considered only in terms of additional investment either in the older businesses or new ventures. According to the classical economists investment was determined by marginal productivity of capital and rate of interest. Marginal productivity of capital was the actual marginal yield of investment. But Keynes was of the view that actual yield of investment takes place only when investment has been made and it has started yielding fruit. The investment decision is thus based not on actual yield of investment but on the expected yield and the market rate of interest. And therefore we should think of expected yield as a determinant of investment and not the actual productivity of capital.

Keynes was right from the beginning of the view that expectations play a major role in the economic decisions of all kinds and more especially in the case of investment decisions. Based upon expectations he modified the classical contention that marginal productivity of capital determines investment demand. In place of marginal productivity marginal efficiency of capital [MEC] was substituted. The idea had been suggested by Wickell in terms of his natural rate of interest as contrasted with market rate of interest and Irving Fisher had also anticipated Keynes to a large extent. But Keynes stated the whole proposition in a clear cut manner. The meaning of MEC in technical terms can be understood in the following manner.

Let C_r be the replacement cost of the capital equipment in question and let $R_1, R_2, R_3, \dots, R_n$ be the series of successive returns per period [say annual] which are expected to be yielded by this investment. Then we can find a rate of discount at which when all the future yields are discounted to their present worth the aggregate value of these discounted yields will be equal to C_r . Let this rate of discount be r so that we can write

$$C_r = \frac{R_1}{1+r} + \frac{R_2}{(1+r)^2} + \frac{R_3}{(1+r)^3} + \dots + \frac{R_n}{(1+r)^n}$$

Then this r is called the marginal efficiency of capital which the investor expects to earn on investment.

Keynes maintains that this MEC, r , is to be compared with the market rate of interest to find out whether a particular investment is profitable or not. Let us suppose, for example, that the market rate of interest is i , then

$$\frac{R_1}{(1+i)} + \frac{R_2}{(1+i)^2} + \frac{R_3}{(1+i)^3} + \dots + \frac{R_n}{(1+i)^n} \text{ will give us the value of}$$

an investment in terms of the present worth. Let this be V . Then in order that the investment should be profitable V should be greater than C , which means that $V > r$. On the other hand if $V < r$, then V will be less than C , making investment unprofitable by turning investment into a less valued asset.

But the above analysis is quite a simple thing and naturally not sufficiently nearer reality. For example, we must remember that different prospective yields R_1, R_2, \dots, R_n are not determined by something independently of income levels or changes in it. The peculiar thing about MEC is that when it rises, it increases investment and hence income, but increasing income means bigger future yields, i.e. bigger R 's and hence given C , MEC rises which in turn may lead to still higher incomes. MEC, after all is based upon expected yields, i.e. on the values of R 's and the values of R 's are naturally influenced by changing income. Moreover, this income, to begin with, might have been changing either due to changes in consumption or investment. To bring into account multiplier process generated by initial expenditures of consumption and investment, we must expect that once MEC starts rising, there should be nothing to stop it and once it starts falling there should be nothing to save it. But actually this is not the case. With increasing income, marginal propensity to consume falls leading to a less than proportionate rise in consumption and since consumption changes are a major influence upon the determination of MEC, falling marginal propensity to consume works towards a reduction in the MEC. Again, as full employment is reached income gets redistributed more and more in favour of non wage income with the result that demand for consumption goods fails to keep pace with the total increase in demand. This again causes partial problems of effective demand and this works against MEC. Thus we see that considering income or output we have to agree that MEC is directly influenced by income.

Some people would go further than this. They would contend that the above arguments have been based upon a given C . Actually determination of C , is as much subject to changes in income and output as MEC itself. With changing income and output factor cost of production is quite likely to undergo a change, i.e. to say there

may be diminishing returns or increasing returns, or there may be technical innovations accumulations or destruction of capital and so on. Because of all these reasons C_t or replacement cost of investment is bound to undergo a change. However no set rules can be given as to whether C_t will rise or fall with rising income. Probably it will be possible to state something more definite if we calculate C_t for each type of capital equipment separately so that rising incomes may make some investments profitable and some less profitable or even unprofitable. Moreover expected yields cannot be visualized for more than certain period and therefore if the investment project happens to be of very long life investment will be more influenced by yields in the foreseeable future only. In other words, the MEC as understood by us will fail to be fully effective. Changing rates of income and output in the present and near future are more likely to influence investment decisions than expected returns of a distant future. For this reason some people contend that in the developed economies since there is already a high level of income and demand therefore the possibility of yields in the distant future is not expected to be as uncertain and dim as in the case of underdeveloped countries where income and output are at a low level and where they may not increase.

Further it must be noted that interest elasticity of demand is also not a simple thing. Though both classical economists and Keynes believe that investment is sufficiently interest elastic still it is quite doubtful if interest exerts more influence than the expected yields on investment. Often expected yields are not known or cannot be imagined beyond a certain date but if investment is to be made long term contracts may have to be entered into or at least the entrepreneur has to provide for the possibility of renewing the loan of capital and paying a different rate of interest than he is paying now. Some economists like Hawtrey put forth ideas that businessmen were so sensitive to changes in interest rate that even small changes in interest would well nigh generate trade cycles but all this is a far fetched proposition. We however must recognize that interest elasticity of investment is there. The only thing is that we cannot depend upon it excessively. Small changes in interest may not be able to influence investment decisions. Further there are two limitations why interest elasticity of investment cannot be made use of for increasing investment in every emergency. The first is what Keynes calls the expectations on the part of people that there are certain normal minimum and normal maximum rates of interest. Rate of interest is determined by the money supply and liquidity preference but the most important portion of liquidity preference [viz. speculative demand for money] is determined by the expectations that rate of interest will undergo a change. The result is that when rate of interest approaches its lower limit, people start expecting that it is going to rise and in anticipation of capital losses on securities etc. they suddenly increase the demand for money and

try to sell out securities with the result that the prices of securities fall and rate of interest rises. Just the opposite happens when speculators feel that the rate of interest is going to fall. Therefore, if the rate of interest is already near one of its "limits" and the needs of the economy dictate that it should be pushed further towards the same side the monetary authorities are not likely to succeed because every effort of theirs is likely to be counteracted by changes in liquidity preference. Another limitation of the rate of interest as a possible tool for influencing the investment is that when it has already been reduced to a sufficiently low level the possibility of further reductions is automatically ruled out. For instance, a 2% reduction from 4% would reduce rate of interest to 2%, but a 2% reduction from 2% would reduce it to zero or make money a free commodity. For all these reasons investment though it is supposedly very sensitive to changes in the rate of interest cannot be influenced in all cases by interest changes as there are limits to such changes.

Thus we see that investment plans are directly affected by the supply of finance which often manifests itself in the supply of money. Greater supply of money not only makes it cheaper to invest by reducing the rate of interest but also makes it easier to finance investment by making money easily accessible. Here we find a radical difference between the position of the classical economists and the Keynesians. According to the classical economists money is only a veil and nothing but an expression of real savings and real investment as far as the analysis of output and employment goes. There a single factor viz. rate of interest affects both the supply of savings and the demand for savings which to them was the same thing as investment demand. But Keynes believes that savings and investment decisions are made quite independently of each other and by entirely different set of forces. It is therefore not necessary that the plans of investment and savings should give us planned savings equal to planned investment. Such a notion is the old one put forth by the classical economists only. Actually since investment decisions are made by interest and MEC and saving decisions are made by MPC there is no reason why the two decisions should give the same quantities. To find out as to how investment greater than savings may be planned and executed we must remember that greater investment can always be financed by credit creation and as a result savings will also rise so as to become equal to increased investment. Therefore, it is correct to say that investment plans are affected by the supply of finance [through changes in the rate of interest] but it is wrong to append the statement that finance is provided only through savings. There are so many sources through which finance for investment may come and savings are just one of them. In quite some cases savings may be quite an unimportant source as compared with the total investment finance.

Changed investment exerts a major influence on the determination of changes in income. Usually, when we start from a given

position where the economy is in equilibrium position, not consumption but investment will undergo a change to bring about a change in income. Prof. Harrod, however, attributes the role of dynamic element to savings. He says that 10% income saved every year together with an investment of 10% of national income per year will not keep the economy stable, for 10% saved income will increase the total stock of economy and thus impart it a growth stimulus. But this consideration comes when we think of long term development of an economy. During the short period changes in investment are far more important than changes in savings, mainly because changes in savings come as a result of changes in investment. Savings are a residual, says Keynes. When investment and savings are not equal, not investment but income changes to such an extent that as a result savings change to become equal to investment.

Granting, then, that investment is the leading force in the group of C and I we find that changes in investment directly lead to changes in Y . Changed investment however will not increase Y only by an amount equal to investment, but through multiplier effect a multifold change in income will take place. Prof. Hicks, in his *A Contribution to the Theory of Trade Cycle* makes use of the changes in investment at various rates and directions together with the assumption of time lags to give us a number of possible patterns which changes in income and employment will take according as investment pattern assumes a certain shape. For instance, Hicks shows how, if we increase investment once and maintain it there year to year, the economy will not attain a new equilibrium position in one jump only, rather its income will show an increase at a falling rate till it reaches its new stationary equilibrium in conformity with higher investment and consumption and hence higher income. On the other hand if we go on increasing investment regularly by a given amount, our economy will gradually settle down to a steady rate of growth. Similarly cyclical patterns etc. can be traced by simply changing the investment rates and directions.

Changes in investment do not end with changes in income, but will reflect back upon investment through changes in consumption demand. After all investment is based upon MEC and when income and consumption rise a number of times by multiplier action, investment is further induced. Prof. Hicks makes use of this distinction between "induced" investment and "autonomous" investment to show the vital role which each of these types of investment plays in the determination of income level. For example, when induced investment falls due to reduction in demand, it is autonomous investment which again sets the gear of the economy in the upward direction. Moreover, in conclusion we must note that changes in investment need not always lead to increased Y unless investment is being made when the economy is at less than full employment.

position. When once full employment is reached money investment will not be corresponded by real investment with the result that real income and output and employment will not rise as a result of this investment and the multiplier action will only lead to increased prices. Thus as Keynes himself points out increased investment increases income employment and output before the economy reaches full employment but beyond that the change is manifested only in increased prices.

POINTS TO REMEMBER

- 1 By investment here is meant new investment and it is determined by MEC and rate of interest. MEC is based upon expectations and is quite different from marginal productivity of capital.
- 2 But though for investment i and r are to be compared we must note that R_1, R_2, R_n are also not given quantities. These depend upon income, employment, consumption, investment and so many other factors. Similarly C_r is also not independent of the level of income or changes in it.
- 3 Interest elasticity of investment has its own limitations in the form of stickiness of interest rates and the reduced possibility of further reduction in interest rates beyond a limit. Liquidity preference may change with changing interest rates.
- 4 Though cheaper finance helps investment investment is not limited by it as finance can be provided by credit creation. Further savings are just one source from which finance for investment may be coming.
- 5 Investment, savings and income have a complicated interconnection and they act and react upon one another. Till full employment investment increases income and employment but beyond that only prices rise.

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Q 10. "One who tries to save destroys real capital"
Examine the validity of the statement. (Karnatak 1960)

"Saving is a private virtue but a public vice" Discuss
(Karnatak 1959)

Ans. Prior to the advent of the Keynesian school of thought, it was presumed in accordance with the assumptions of "micro-economic analysis" that saving is an unquestionable virtue. Hard work, maximum of earnings, thrift and minimum of expenditure on consumption were extolled by the puritans to be the highest of virtues. Max Weber gives a vivid description of the concept of economic morality practised by the puritans after the Reformation in Western Europe (Max Weber, *Protestant Ethic and the Rise of Capitalism*). Everyone was advised to be as industrious as possible in his own calling and accumulate a fortune by maximising earnings and minimising expenditure. The belief in the virtue of savings remained totally unquestioned till the appearance of the *General Theory* of Keynes in the year 1936, which departed sharply from the traditional mode of analysis. Keynes arrived at a conclusion exactly contrary to the one that was universally accepted at his times because of the generality of his theory which was founded on macro-economic analysis. The conclusions deduced from micro-economic analysis lead us many a time to utter absurdity from the angle of the society as a whole. The controversy regarding saving is an illustration in point.

Saving as a private virtue does not need much explanation. Every individual does possess some instinctive fear of insecurity for the morrow and hence, would like to assure himself in advance that sufficient care is exercised to make the future as secure as possible. The man that indulges in reckless expenditure is likely to land himself into trouble when his resources get exhausted. Everyone is, therefore, well advised to save for the rainy day. Apart from a positive care for the future, saving naturally emerges as a virtue when one condemns all expenditure beyond the barest minimum on grounds of puritanism. If earning be a great virtue and spending a vice, saving automatically emerges as a virtue. This was the religious injunction that was pointed out by Max Weber and he argues, it was this attitude that was responsible for the accumulation of investible funds for investment to make possible the rise of capitalism. Saving was therefore, held to be an implicit virtue. All this analysis was obviously made purely from the angle of the individual and the implications of saving from the social angle were utterly neglected.

The Keynesian departure from the accepted mode of reasoning starts from the proposition that one man's expenditure is another man's income. What is expenditure from one angle becomes income from another. The people who spend and the people who receive stand at two opposite ends—the spender's expenditure becoming the

receiver's income. It is the appreciation of this vital relationship between expenditure and income in the context of a society with a network of exchange relations that brings to light the full implications of the act of spending and not spending. Saving as defined by Keynes is the excess of income over expenditure for consumption purposes. In other words, saving is the residue that remains after meeting one's consumption requirements out of a given income. Given the size of the individual's income, more of savings could be realised only by curtailing consumption. The precise point at issue is whether curtailment of consumption could be regarded a virtue. The pre Keynesian line of reasoning regards a cut in consumption to the barest minimum as so ething highly desirable partly on religious and partly on pseudo economic grounds. We have to examine this particular point from the social angle on a macro basis as done by Keynes with a view to assess the implications of a general curtailment of consumption pursued by the members of the community in view of the virtuousness of saving as against expenditure.

A general curtailment of consumption by the community as a whole would obviously imply a cut in the demand for consumer's goods. A restraint of consumption must therefore create a deficiency of demand for consumer's goods producing adverse effects on the prices of the consumer's goods and the income of their producers. A depression of demand for consumer's goods would mean not only less of income for the producers of these goods but also less of demand for the producer's goods that are required to produce the consumer's goods. The demand for producer's goods is a derived demand in the sense that these goods are not required directly for their own sake but are demanded because of the demand for consumer's goods for the production of which they are required. A deficiency of demand for the producer's goods would depress the incomes of the producers of these commodities and hence the consumption demand of those employed in the producer's goods industries would also register a fall. Thus a general reduction in consumption because of the belief in the virtue of saving would bring about a general deficiency of demand, leading to a considerable fall in production, a shrinkage of the national income and a low level of equilibrium because of the folly of saving. Saving which is a private virtue (if overdone it ceases to be a virtue even from the purely private interests) becomes a public vice because of the influence of saving in reducing the national income when savings are kept idle. Income, savings and consumption are closely inter connected and whether saving is a virtue or a vice has to be determined on the basis of the effect of saving on income. Savings that are hoarded certainly reduce the size of the national income and hence hoardings are certainly a vice under normal times. (Hoardings during war times serve a useful purpose in the sense that to the extent of the value of the hoardings inflationary pressures are held under check. In fact the actual influence of hoardings is likely to exceed their static

tical value in view of the multiplier effects of spending which otherwise would have been produced) What is a vice actually is not the act of saving but the act of hoarding Saving which is supposed to be a private virtue could also serve a good public purpose if only savings be embodied in investment—in the creation of real capital assets It is the idle savings that stand to blame and not the savings that are productively used for the creation of investment goods One who tries to save destroys real capital only if one is unwise enough to hoard one's savings and not make them available for investment In fact no economic progress could ever be made without saving and investment being undertaken on a large scale Savings that are matched by the creation of real capital assets lie at the root of economic development especially so in the early stages of economic growth A diversion of resources from consumption to investment is the very basis of progress and the stand taken by Marshall in this connection applies especially to the under developed economies which stand badly in need of the creation of capital assets The Keynesian analysis is obviously made from the angle of economies which already possess almost a surfeit of capital equipment and which therefore are mainly bothered about the constant utilisation of capital which depends on the perennity of demand The virtuousness or otherwise of savings cannot be decided unless one considers the relationship between consumption savings investment and the national income Whether it is a virtue or a vice depends entirely on the influence of saving on the national income which in turn depends on the relationship between savings and investment Unless we know what happens to investment we cannot pronounce a judgment on savings

POINTS TO REMEMBER

- 1 Saving was supposed to be an unquestionable virtue on the basis of wrong micro economic analysis
- 2 Max Weber extolled the role of savings as the chief prime motive for the initiation of the process of capitalist development
- 3 The Keynesian Revolution departs sharply from the traditional viewpoint One man's expenditure is another man's income
- 4 The relationship between savings, spending for consumption and investment was closely examined by Keynes
- 5 The general effect of a curtailment of consumption would be the creation of a general deficiency of demand
- 6 Idle savings that are to blame and not those utilised for purposes of investment

SELECT READINGS

- 1 Keynes *General Theory*
- 2 Halm *Money*
- 3 Robertson *Money*
- 4 Crowther *An Outline of Money*



Q 11 State Keynes views on the equality of savings and investment and show whether they would necessarily be equal under macrodynamic conditions (Allahabad 1960)

'Savings and investment are equated by variations in the level of income'

'Savings and investment are equated by variations in the rate of interest' Discuss (Gauhati 1959)

In what sense must savings and investment be always equal? Has such equality any relevance in the determination of monetary policy?

Savings and investment are always equal. 'Savings and investment are equal only in equilibrium. Do you think there is a possibility of reconciling these two statements? (Punjab 1958)

In the light of the Keynesian definitions, consider how far the equality between savings and investment in equilibrium is meaningless (Allahabad 1958)

Show how, according to Keynes, an economy can attain stable equality between savings and investment in equilibrium

"The so called equality between savings and investment is meaningless Discuss (Delhi 1956)

Ans The Keynesian analysis of the relationship between savings and investment is an important landmark in the course of evolution of his general theory about employment interest and money and especially in the process of efflorescence of his thought about the causes that determine the total volume of investment and output. Partial micro reasoning done about the causes and consequences of saving and investment in the pre-Keynesian era could not obviously strike the heart of the problem due to a confused state of analysis which could not properly assign a central role to the influence of savings and investment on the size of the national income. The uniqueness of the general theory in connection with the analysis of the relationship between savings and investment lies in bringing to light the precise influence on income produced by the process of savings and investment. The integration of the various threads into a single well knit scheme is the speciality of the Keynesian mode of thought.

The savings investment controversy has been very much alive in economic literature for quite a number of years especially because of the fact that Keynes in his Treatise had stated that savings and investment can be different while in General Theory he maintained that they must necessarily be equal. Actually if we come to analyse the problem we find that the real differences lie in the definitions adopted and not in any defects of logic. People who quarrel with the

definitions given by others do so mainly on the basis of the usefulness of the definitions put forth

Briefly speaking we say that whether savings [S]—investment [I] or not depends upon how we define the two. For instance if we say that income [Y] is earned by consumption expenditure [C] and investment expenditure [I] so that $Y = C + I$ and Y earned is either saved or consumed so that $Y = C + S$, then necessarily $S = I$ if the act of consumption in the first equation is the same as the act of consumption in the second equation. In other words we say that an act of consumption by creating consumption expenditure is on the one hand generating income and on the other if we say that by that very consumption act we are consuming away a part of the income which is being created then C in both the equations $Y = C + I$ and $Y = C + S$ must be the same. By the same logic whatever income is being generated through the process of I is not being consumed and hence is being saved and hence $S = I$.

It is quite clear that the above equality between S and I is being obtained by a peculiar logic viz that the act of generation and utilization of the income is the same. Naturally such a definition leading to equality between S and I pertains to an ex post definition—S and I covering a certain period of time howsoever small or long it may be. Further in this definition the moment an expenditure takes place it becomes a part of income and is hence either being consumed up or saved and naturally if this expenditure is coming from consumption expenditure it is being consumed up, if not it is being saved. Under such circumstances we could not get anything other than equality between S and I. We can also say that whenever investment expenditure rises that very moment Y increases by an equivalent amount and that increased Y has to be held and owned by someone or other. If the recipient of that Y spends it on further it must create an equivalent additional income and be held by someone else. Thus the very fact that any expenditure made must be received by somebody necessitates that it become a part of Y and hence add up to either C or S. We must recall here that this equality of S and I is following because of peculiar definition of Y which is being adopted by Keynes in his *General Theory*.

In the *Treatise* however Keynes had adopted a different definition of Y and therefore could maintain that S and I can be different. There all receipts do not form part of Y. Abnormal profits or losses are neither to be added to income nor are they to be subtracted from it. For this reason Keynes could state that when I rises, the only result is that total expenditure is more so that profits [Q] rise. Since savings are coming out of normal income, the result is that $I > S$ by an amount equal to additional investment or profits Q. Similarly if investment falls abnormal losses take place and lead to a situation where $S > I$. Keynes was excluding occurrence of abnormal profits or losses from the income accounts to show the

effect of changing investment on prices. His main purpose was to find out the way prices of consumption goods and capital goods get determined and fluctuate with changing investment leading to abnormal profits or losses.

Thus for Keynes possibility of inequality of S and I in the *Treatise* was useful because it could help in the explanation of fluctuations in prices. In his *General Theory* on the other hand the definitions adopted were of greater significance because there his purpose was not to discuss changes in prices but rather to eliminate them for finding out changes in real income and output. The question arises whether Keynes succeeded in his mission. We find that equality of S and I in fact gives us no help in the causal analysis of fluctuations in income. What definitions of *General Theory* do is to eliminate the possibility of artificial changes in the expression of income and employment caused by changes in monetary values. [In the *Treatise* his purpose was to analyse these monetary causes which bring monetary changes in terms of prices, profits etc. and so we find the possibility of inequality between S and I .] The real causes of fluctuations in income and employment are found in the four ultimate determinants of the economic system. Rate of interest gets determined by money supply and liquidity preference, investment by rate of interest and marginal efficiency of capital and consumption by consumption function. Savings and investment in *General Theory* are not the determinants but the determinates of the system. And to facilitate the analysis of income and employment changes they have been assumed equal. Keynes says that in the savings are a residual following Y and consumption in the system. Changes in I lead to changes in Y in such a way that savings become equal to investment.

Prof Robertson had advanced quite a different set of definitions of S and I by which their inequality was not supposed to be used to give us changes in prices and emergence of abnormal profits or losses only but rather changes in the income as such. Prof Robertson says that instead of assuming that an act of consumption for example is to be viewed both as generating Y and spending on consumption out of that generated income we should make the realistic assumption that it takes time to spend a part of the income which is being earned. Accordingly he says that we can divide time into small periods in such a way that income earned in one period cannot be spent in that period but becomes available for disposal only in the next period. The calendar length of this period is of little significance and may vary from economy to economy. But given the length of this period which may be called a day, Robertson says that income earned in day 1 is the result of the expenditure on C and I in day 1 but S and consumption expenditure during day 1 was coming out of the income earned during day 0. Thus while in day 1 disposable income [earned in day 0] was divided into C and S income earned during day 1 [which is to become disposable income of day 2] is equal to

$C+I$ Thus obviously disposable income of day 1 will be \leq disposable income of day 2 according as in day 1 $I \leq S$. Prof. Robertson maintains that this distinction between earned and disposable income enables us to trace changes in income from period to period. He also maintains that this distinction not only helps us in tracing out changes in income but also enables us to find out broadly whether any forced savings or dissavings are taking place. For instance with rising I , and given S the result may be just rising prices and rising money income only if the process is not accompanied by increase in real output.

On the face of it Prof. Robertson's approach looks more impressive as it purports to give us an explanation of both fluctuations in income as well as prices. Further by varying the time interval between different days' or by varying the lengths of the 'days' for different sectors of the economy it may be possible to weave out intricate patterns which the fluctuations in incomes and prices of an economy will take place. But in reality Robertsonian analysis does not help much just as Keynesian analysis does not. In Robertson we don't find any reasons why I should be greater than S or vice versa. We don't know what should cause such a change and in what direction, this change should be expected to take place next period. If it is maintained that changes in I and S in the coming periods will depend upon prices and incomes then we have to find out the causal relations between incomes and consumption and prices and investment decisions. In other words we are required to go into causes which determine investment and consumption decisions and that is what Keynes is doing in his *General Theory*. And Keynes certainly does it more systematically and more successfully. It is therefore not to say that Keynes's equality between S and I is meaningless. It has its own place and is not to be dislodged by any substitute.

However a thumping distinction between the *ex ante* and *ex post* concepts of S and I has come from the Swedish economists and is very helpful if incorporated in the Keynesian system not only in understanding what exactly Keynesian equality of S and I means but also in finding out the real limitations of such an assumption of equality. According to this distinction between *ex ante* and *ex post* S and I we should distinguish between what we plan to save and invest and what we actually save and invest. Our plans to save and invest are based upon our investment and savings schedules showing various amounts of savings and investment at different levels of incomes, prices etc. However in the *ex post* sense I and S must be equal for they cannot be otherwise. Now if planned savings and planned investment are not equal then changes in income will take place. For example, when with given rate of interest, income etc. people want to invest more than they plan to save the result will be that bigger investment as compared with savings will lead to increased income [and naturally out of that increased income increased savings will be made]. On the other hand if

people want to invest less than they want to save, smaller investment will take place, but smaller investment will lead to reduced income and hence reduced savings. It was for this reason that Keynes could also state at one place that S is always equal to I and at another that when I rises, S rises in such a way that S rises to become equal to I . It is to be noted that this distinction between *ex ante* and *ex post* concepts of S and I opened up an entirely new vista of analysis of fluctuations in income and employment. In Hicks, for example we find the incorporation of a variety of time lags in conjunction with different patterns of investment leading to different patterns of fluctuations in income of the economy. It is with the help of distinction between planned S and planned I and the acceptance of their inevitable *post facto* equality that helps us in an elaborate analysis of trade cycles. Of course, just this distinction is not sufficient, problems of capital output ratio, the effect of changing demand and consumption on investment decisions, the distinction between induced and autonomous investment, the distinction between investment in working and fixed capital and a host of other things are needed for a complete analysis of trade cycles, but this does not in any way minimize the importance of this distinction. Thus we can say that Keynes's equality between S and I , provided we keep in mind the distinction between *ex-ante* and *ex post* concepts of these, is not at all a meaningless thing, but a necessary and useful thing in the explanation of fluctuations in income and employment of a free enterprise economy.

In conclusion we can say that this equality between S and I does not mean that the economy is stable. In Robertsonian system the economy will be stable if S and I are equal but not necessarily in Keynesian general theory system, since in Keynes's *General Theory* equality between S and I follows from the definitions adopted by him. In Keynesian *General Theory*, it is not the equality between S and I which is needed to stabilize the economy but the controlling of consumption and investment decisions. In the *Treatise*, however, definitions of S and I were designed to help in the analysis of prices. Therefore it follows as far as price stability goes equality of the S and I of the *Treatise* is of special significance for the monetary policy, because by keeping $S=I$ it will be possible to avoid price fluctuations. But when we come to the maintenance of income stability in the economy, we find that equality between S and I [of the *General Theory*] does not suggest any action for the monetary authorities. Rather we have to search for the determinants of investment and consumption to find out the role of rate of interest etc. in order to make the analysis helpful for the monetary authorities. According to the *General Theory*, the monetary authorities should try to regulate the rate of interest in such a way that investment is regulated through it and at the same time the monetary authorities should try to provide extra purchasing power through deficit financing etc. in order to stimulate demand and consumption in the economy.

POINTS TO REMEMBER

- 1 Whether $S=I$ or not depends upon what we mean by the two categories. We should therefore try to look at the usefulness of the definitions of S and I rather than their equality.
- 2 In Keynes' General Theory⁹ by definition $S=I$ because $Y=C+I$ and $Y=C+S$. C entering into both equations in a common way and by a single act on the part of the consumers.
- 3 In the Treatise however abnormal profits and losses are excluded from income out of which S is to come and hence there I and S can be unequal leading to profits (or losses) and changes in prices.
- 4 In the General Theory Keynes wanted to analyse changes in income and we are to see how far the definitions of S and I help him.
- 5 Prof. Robertson introduced the difference between earned income and disposable income leading to possible inequality between S and I and changes in disposable income from period to period. But he failed to give as a complete causal analysis as to why investment should be different from S .
- 6 Keynes just assumes $S=I$ and tries to locate the causes of fluctuations in income in the psychological functions and the quantity of money. And if we introduce the ex ante and ex post distinction of S and I we get an admirable result. Inequality between ex ante S and I will change income but ex post S and I must be equal.
- 7 For monetary policy from Treatise we find that S should be kept equal to I to keep the price levels stable. In the General Theory $S=I$ has no meaning for stability. There investment and consumption decisions should be controlled. The only monetary action suggested is increasing purchasing power, money supply and reduction of interest rate.

SELECT READINGS

- 1 Keynes *A Treatise on Money*, Vol. I
- 2 Keynes *General Theory*
- 3 Lutz Friedrich A. The Outcome of the Saving Investment Discussion. *The Quarterly Journal of Economics* 1938
- 4 Lerner A. P. Saving and Investment Definitions Assumptions, Objectives. *The Quarterly Journal of Economics* 1939
- 5 Robertson D. H. Saving and Hoarding. *Economic Journal* Sept 1933
- 6 Ohlin Bertil. Some Notes on the Stockholm Theory of Saving and Investment. *The Economic Journal* 1937
- 7 Klein *Keynesian Revolution*

Q 12 Examine the various concepts of the multiplier
 Discuss the applicability of the Keynesian theory of the multiplier
 to an under developed economy (Gujarat 1959)

Discuss the theory of the multiplier, with special attention to
 the leakages and the factors which interfere with its working in
 under developed countries (Punjab 1958)

Ans The conception of the multiplier was introduced for the first time into economic analysis by Prof R F Kahn¹. In his concept of employment multiplier he envisaged a relationship between the primary employment created by a piece of investment and the increment of aggregate employment. As he has put it. It measures the ratio of the increment of total employment which is associated with a given increment of primary employment in the investment industries. For example let us suppose an investment of Rs 7000 is made on the construction of an irrigation dam 1/3 2000 of which is spent upon capital equipment and the remaining Rs 5000 upon labour. Let us further suppose 50 labourers are employed—this represents the primary employment. But the process of employment creation does not end with this. Let us suppose 90% of the wage income i.e. Rs 4500 is spent by the labourers upon consumption goods. This expenditure is equivalent to an investment in the consumption goods industry which creates further employment and thus the process goes on. Suppose at the end of the process the piece of investment creates an aggregate employment of 900 then the employment multiplier is $\frac{900}{100} = 4$

Symbolically if a given investment ΔI leads to a primary employment of ΔM total employment of ΔT and K be the employment multiplier then $\Delta T = K \Delta M$

The concept of the multiplier has been borrowed by Keynes from Kahn and has been incorporated into the General Theory. The Keynesian multiplier is different from the Kahn's employment multiplier. The Keynesian concept is known as the 'investment multiplier' which represents a relationship between an increment of investment and the resulting increment of income.

Symbolically if ΔI be the increment of investment (also called the multiplicand) ΔY the increment of income and K the investment multiplier then $\Delta Y = K \Delta I$

There is a functional relationship between the investment multiplier and the marginal propensity to consume and save

1 The Relation of Home Investment to Unemployment Economic Journal June 1931

We know that¹ if ΔY be the aggregate income ΔC consumption and ΔI , investment then

$$\Delta Y = \Delta C + \Delta I$$

$$\text{or } \frac{\Delta Y}{\Delta Y} = \frac{\Delta C}{\Delta Y} + \frac{\Delta I}{\Delta Y}$$

$$\text{or } = \frac{\Delta C}{\Delta Y} + \frac{\Delta I}{\Delta Y}$$

$$\text{or } \frac{\Delta I}{\Delta Y} = 1 - \frac{\Delta C}{\Delta Y}$$

$$\text{or } \frac{\Delta Y}{\Delta I} = K = \frac{1}{1 - \frac{\Delta C}{\Delta Y}}$$

where $\frac{\Delta C}{\Delta Y}$ is the marginal propensity to consume and $1 - \frac{\Delta C}{\Delta Y}$ is the marginal propensity to save. The multiplier is thus the reciprocal of the marginal propensity to save.

In recent times another concept of multiplier has been evolved namely, foreign trade multiplier. If the marginal propensity to save is s and the marginal propensity to import is m (i.e. increment of expenditure on imports to increase in income) then the foreign trade multiplier $F = \frac{1}{s+m}$. For instance if $s = \frac{1}{2}$ (i.e. $\frac{1}{2}$ of the increment of income is saved) and $m = \frac{1}{6}$ (i.e. $1/6$ of the increment of income is spent on imports),

$$F = \frac{1}{\frac{1}{2} + \frac{1}{6}} = 2$$

The multiplier does not always operate automatically and smoothly. Neither does the income always increase by the full value of the multiplier. There are certain offsetting factors which have to be taken into account in estimating the net increase in income as a result of an increment of investment. First a net increase in public investment may be nullified by the diminished private investment. For instance the method of financing the public investment may raise the rate of interest and thus retard private investment. Secondly an increase in public investment may raise the prices of capital goods and thus affect private investment. Besides there are leakages which may interfere with the smooth operation of the

multiplier process and slow down the pace of the multiplier. The following are the possible leakages in the multiplier:

- 1 The part of income that is saved in the form of idle bank deposits
- 2 The part of the increment of income that is used to pay off debts
- 3 The part that is invested in securities purchased from others who fail to spend the proceeds
- 4 The part that is spent on imports which does not help home employment
- 5 The part that is devoted to the purchase of output supplied from excess stocks which may not be replaced. This is the "negative investment" or disinvestment

The Keynesian investment multiplier as discussed above is a purely *static* concept. The most serious weakness of this concept is that it abstracts from the "time element" and presumes all changes to happen simultaneously and instantaneously. But in the real world, the adjustments in income and employment do not take place instantaneously but only after an interval of time the length of which depends upon various institutional, technical and structural rigidities and bottlenecks.

Recently the concept of the multiplier has been given a *dynamic* form by Prof. J. R. Hicks¹ by introducing "time-lags" in the concept. In this dynamic theory of the multiplier, saving is not considered as a function of the current income but that of the income of the preceding period. In other words saving is the difference between the income of the preceding period and consumption of the current period. Among the various lags which interfere with the working of the multiplier mechanism the two types of lags are of utmost significance. First, the lag between the increase in consumption and increase in production. The length of this type of lag depends upon such technical factors as the availability of raw materials, working capital, transport and communications, capital equipment and also upon the psychology of the business community and its response to increase in sales. Secondly the lag between the receipt and disbursal of income. The length of this type of lag depends among other things upon the spending habits and the attitudes of the recipients of new incomes towards saving.

How far is the Keynesian multiplier theory applicable to the under developed country?

The Keynesian multiplier theory is based on certain implicit assumptions. In the first place, Keynes assumes the existence of *involuntary* unemployment. As Keynes has defined the term "Men

¹ Hicks J. R. — *A Contribution to the Theory of Trade Cycle*, Ch. 2.

are involuntarily unemployed if in the event of a small rise in the price of wage goods relatively to the money-wage, both the aggregate supply of labour willing to work for the current money wage and the aggregate demand for it at that wage would be greater than the existing volume of employment¹. In other words the presence of involuntary unemployment means that being under the money illusion² the labourers are prepared to accept a lower *real* wage although they may resist a cut in money wage. This crucial assumption underlying the Keynesian multiplier does not hold good in the under developed economy. The nature of unemployment in the under developed country is completely different from the involuntary unemployment peculiar to the advanced industrial country. The type of unemployment characteristic of the under developed country is known as *disguised unemployment* which does not make room for any substantial cut in *real wages*. In the under developed country the *real wage* even in the urban sector not to speak of the rural sector is around the bare minimum necessary for physical existence.

Another crucial assumption underlying the Keynesian multiplier is the existence of excess capacity in capital equipment. But as is well known one of fundamental factors holding up the pace of economic development in the under developed country is the scarcity of capital and capital equipment. In the absence of excess capacity in the capital equipment an increase in investment merely leads to inflation of incomes and prices without increasing output or real income in the corresponding degree.

Let us examine more closely the nature and causes of the various time lags and bottlenecks which are likely to interfere with the multiplier process in the under developed economy. An increment of investment leads in the first instance to an increase in output and employment. The next increase according to the multiplier theory ought to come from the consumption goods industry. In a typical under developed country the chief consumption industry to which the additional demand would presumably be directed is agricultural foodgrains. But agriculture all over the world is an industry where for technical reasons supply curve is inelastic over the short period. This is more so in a predominantly agricultural under developed country. It is an observed phenomenon that the supply curve of foodgrains in the underdeveloped country is not only inelastic but over a certain price range it tends to be *backward sloping*². This is explained by the fact that as the income of the agriculturists rises, their propensity to consume also increases. As foodgrains constitute the main item of their consumption they consume more of their output than before. This leads to a reduction in the *marketed surplus* of foodgrains. This means in turn that the non agricultural sector now has to pay still

1. Keynes J M *Op Cit* p 15

2. United Nations, *Measures for Economic Development of the Under developed Countries* p 42

higher prices for its foodgrains and raw materials, the industrial wages and with them prices begin to rise resulting in a vicious spiral of inflation

Apart from these reasons, the agricultural producer is rather reluctant to act in the way postulated for entrepreneurs by Keynes in response to increased demand. In the under-developed agricultural sector of the under developed country production is more for self-consumption than for market and a substantial part of the business does not come under money transactions at all. A given increase in demand consequent upon an increment of investment does not result in output of the corresponding order

One may expect that the position would be different in the industrial sector. But even here the time lags and bottlenecks of similar nature prevent output and employment from increasing to any substantial extent. The basic reasons here are the absence of excess capacity in the capital equipment non availability of working capital, scarcity of skilled labour and technical personnel and various other bottlenecks and rigidities characteristic of a shortage dominated economy

The net result of the various time lags and structural rigidities and bottlenecks is that the investment multiplier is much higher in terms of *money* income than *real* income and to that extent inflationary pressure is generated

POINTS TO REMEMBER

- 1 We may distinguish three different concepts of "multiplier" namely (a) employment multiplier (b) investment multiplier and (c) foreign trade multiplier
- 2 The Keynesian investment multiplier is a purely static concept as it abstracts from the time element and assumes all adjustments to take place instantaneously and simultaneously. Prof. Hicks, however, has dynamized the concept by introducing the idea of 'time lag'
- 3 The Keynesian multiplier theory is of limited applicability to the overpopulated underdeveloped country. At first glance it seems that since the marginal propensity to consume is much higher in the backward country than in the advanced industrial country, the multiplier would operate more vigorously in the former. This, however, is true only in regard to money income and not real income

The assumptions underlying the Keynesian multiplier theory like the existence of involuntary unemployment (i.e. the scope for a cut in real wages), the presence of excess capacity in the capital equipment availability of skilled labour and technical personnel and transport which ensure an elastic supply of output do not hold good in the underdeveloped country

SELECT READINGS

- 1 Keynes J M *General Theory* Ch X
- 2 Kunhara K K *Introduction to Keynesian Dynamics*, Ch VI
- 3 Singh V B (ed) *Symposium on Keynesian Economics* (articles on Keynesian economics by Dr V K R V Rao and Dr A K Das Gupta)

Q 13 Examine the role of expectations in determining output and employment (Bombay 1958)

Examine the appropriateness of the Keynesian analysis of the role of expectations as a determinant of investment (Calcutta 1956)

Ans The stability and progress of any society is largely conditioned by the volume of investment. The larger the proportion of the national income that is saved and invested the greater would be the rate of production of income yielding assets and therefore the rounds of income to flow in the subsequent periods of time could be expected to grow larger on the assumption of a full use of the assets produced. The production capacity during a given period of time depends to a great extent on the investment made taken during the previous periods in order to create durable assets of production and on the same line of reasoning the production capacity of the future would depend on the volume of investment undertaken in the present. We can easily conceive of a regular direct variation relationship between the flow of investment and the flow of the national income presuming that the complementary conditions such as the supply of raw-materials the continuance of demand labour management relations etc work in the normal way. It would not be any exaggeration to contend that the fate of a given economy depends in the long run on the regularity of the flow of investment. It is therefore of the highest importance to know what precisely are the factors that determine investment in a given community and examine in this connection the Keynesian analysis regarding the role of expectations.

We had better start off with the presumption that we are to examine the appropriateness of the Keynesian analysis only in the light of the conditions of a capitalist economy which implies among other things (a) freedom of choice regarding occupation consumption saving and investment, (b) the right to the accumulation of private property and (c) the right to the pursuit of self-interest within the legal framework of society. Investment in such a society obviously takes place only on the basis of a pursuit of profits. The principal factor which exercises a decisive role in the determination of the volume of investment is the expectations of financiers and entrepreneurs regarding the likelihood of making a fortune in the future on the basis of the investment to be undertaken in the present.

The structure of the capitalist mode of production is such that investment has to be undertaken in anticipation of a future demand. Every financier and entrepreneur contemplating a plan of investment must be agitated in his mind about the possibility of

making a profit. It must be noted in this connection that the two functions of financing and enterprise are largely separated in modern times and hence the volume of investment undertaken during a given period of time does not depend on either of them alone. A major role of course is played by enterprise in the determination of the volume of investment. It is pertinent, therefore, to examine the motivation of entrepreneurs in undertaking investment.

It has been made amply clear by Keynes that it is not merely the mathematical impulse to calculate profit possibilities which could account adequately for enterprise. There is always to be found a spontaneous urge for activity based on a sanguine temperament which underlies visions of building up a bright future on the basis of one's own enterprise. In the absence of a natural buoyancy of optimism there would be very little of human activity indeed in the direction of investment for a future demand. This is of particular importance in view of the new impossibility of making reliable forecasts as to how markets would turn in the future. Expectations are usually based on irrational beliefs constructed on the basis of a projection of the present trends into the future. In fact, the predominance of the prevailing trends in the calculations about the future is so disproportionately heavy that favourable conditions of the present lead to sanguine expectations about the future and unfavourable conditions to pessimistic expectations. This is how a boom leads to a further boom more intense than before and a depression to a further depression. Numerous individuals undertaking investment in several directions have to rely perforce on their own expectations regarding the future built up mostly on wishful thinking. The course of investment is determined by the course of fluctuations in the expectations of the entrepreneurs which is guided largely by the state of psychology that moves this class of people either to intense activity or to lethargic slackness. The future is extremely uncertain indeed and he would be a bold man who could make a reliable prediction as to how the situation would change even during the short period.

A decisive factor in the present which exercises an enormous influence on investment is the state of fluctuations on the stock exchanges. The stock exchanges perform the function of a constant revaluation of the existing investment and guide the investors to invest their savings in one form or the other. Investment in securities that already exist does not add a jot to the total volume of investment. What it does is a mere transfer of ownership from one set of people to another. The funds employed on the stock exchanges for purposes of reaping huge speculative gains are so heavy that the genuine volume of investment in real enterprise is likely to be greatly hampered. In fact Keynes contends that real enterprise based on long term expectations is greatly hampered because of the high order of preference received by speculative ventures, at the hands of the business community. The expectations on the

stock exchanges are so mercurial that it is exceedingly difficult to pronounce any judgment as to how the things would change. Keynes regards speculation on the stock exchanges to be highly detrimental to real investment and progress and opines that the British Govt in contrast with the Govt of the U.S.A. has done well in imposing heavy taxes on speculative activities. The stock exchanges would for all practical purposes be useless but for the fact that they provide a comfortable sense of liquidity to the individual investor which in turn provides a great stimulus for investment.

Expectations regarding capital appreciation and depreciation play an important role in determining the volume of investment. These expectations are greatly influenced by the fluctuations on the stock exchanges. There are certain things which one could reasonably expect to come about in the normal course of time. A certain rise in population for instance would be a valuable certainty and hence the demand for at least the necessities of life could be expected to increase. Certain risks could be passed on to others on the basis of a long term contract. Investment in housing for example could be made secure on the basis of long term contracts with the tenants. In such cases there is a secure ground for optimist expectations and hence for long term commitment in investment.

Thus it seems waves and waves of expectations regarding what lies in store in the unpredictable future lie at the root of the investment activities in a modern capitalist community. Expectation about expectations made by others play a decisive role. The Keynesian analysis regarding the role of expectations in determining the total volume of investment in a free society correctly depicts what happens under capitalism. It has however no application to a socialistic situation in which the volume of investment is governed and guided by the Central Planning Board on the basis of its own aims and ambitions. Besides expectations the rate of interest, the monetary and fiscal policy of the state etc also play an important role in determining the rate of investment in a capitalist society.

POINTS TO REMEMBER

1. The economic progress of a given society is largely conditioned by the total volume of investment undertaken from time to time.
2. In a capitalist society the total volume of investment is largely governed by the expected rate of profits.
3. The structure of capitalistic production is based primarily on the anticipation of a future demand.
4. The spontaneous urge for enterprise apart from expectations about profits also plays an important role.
5. Speculation as against real enterprise absorbs a good proportion of the investible funds.

- 6 *Expectations regarding capital appreciation and depreciation also play a vital role*
- 7 *The Keynesian analysis has to be screened in the light of the total situation*

SELECT READINGS

- 1 Keynes *General Theory*
- 2 Dillard *Keynesian Economics*
- 3 Hansen *Guide to Keynes*

Q 14 Evaluate the Accelerator as a cycle maker

(Poona 1959)

What is meant by the term acceleration coefficient ? Is it correct to say that different cycles derive their character from the value attached to this coefficient ? What are the different possibilities in this respect ?
(Gujarat 1959)

'The acceleration principle helps to shed lights on some of the most widely observed characteristics of business cycles ' Elucidate On what factors will the strength of the acceleration effect depend ?
(Karnatak 1959)

Does the acceleration principle offer an adequate explanation of the trade cycle ?
(Panjab 1958)

Ans The concept of the *acceleration coefficient* or *relation* was introduced into economic analysis by Prof R F Harrod in his epoch making work *Towards a Dynamic Economics* The concept has been recently refined and given a usable shape by writers like J M Clark Simon Kuznets Samuelson and Kalecki

The acceleration principle implies a technical relationship between consumption and investment The essence of the principle is that changes in investment are a function not of the absolute level of consumption but of the relative change in consumption On account of this functional relationship between consumption and investment a small change in the demand for consumption goods leads to a much wider change in the demand for capital goods

The concept can be made clear with the help of an illustration let us suppose that the annual output of cloth is 100 and capital output ratio being 1 : 100 machines are required for the production of 100 units of cloth Suppose further that the average life of the machine is 10 years so that 10 machines have to be replaced every year

Let now the demand for cloth increase by 10% which would induce a 10% increase in demand for machines. Thus the demand for machines will be 20 instead of 10 every year. In short while the consumption has risen by only 10%, investment has risen by 100% (from 10 to 20 machines). Let us now assume that no further increase in consumption of cloth takes place : i.e. although there is no absolute decline in consumption the rate of growth of consumption becomes zero. In this case since the demand for machines for the purpose of replacement would rise by 1 machine only the total investment will decline from 20 machines to 11 machines. A fall in the rate of change of consumption will thus cause an absolute change in investment.

The acceleration effect depends in the first place upon the capital output ratio or capital coefficient. Greater the capital coefficient larger would be the increase in investment as a result of a given increase in consumption. Secondly the size of the acceleration effect depends upon the durability of the capital equipment. For instance everything else remaining unchanged in the previous illustration let us suppose that the life of the capital equipment is 20 years instead of 10 years. The replacement demand for machines would then be 5 machines per year for every 100 machines. Now if the demand for cloth increases by 10% the total demand for machines would jump up from 5 to 15 : i.e. it is trebled instead of being doubled as in the previous case of a life of 10 years.

The acceleration effect is decidedly limited in periods of declining demand. A decline in the demand for capital equipment (i.e. disinvestment) is necessarily limited to replacement. A business enterprise cannot reduce its demand for capital equipment below zero all it can do in response to a fall in demand for its product is to curtail its replacement and this is limited to zero. Suppose replacement demand amounted to 10% of the capital equipment and a decline in demand for the finished products equal to 20% sets in. The full working of the acceleration principle would require that the stock of capital equipment should also decline by 20%. But the stock of capital cannot be reduced in any one year by more than the amount of depreciation which is equal to replacement demand. In this case the decline in demand for capital equipment is limited to the 10% replacement demand. The remainder of 20% decline in the demand for finished product will be absorbed by allowing some of the remaining plants and equipment to be idle.

The acceleration effect does not operate in the presence of excess capacity in the capital equipment. If there is enough of excess capacity in the capital equipment, the increased demand can be met by running down the excess capacity and there would be no magnification of demand for capital equipment. This is an important limitation of the acceleration principle. Many increases in the consumer demand may be met by working overtime or adding extra shifts and thus using the existing equipment more intensively. Moreover industries which experience a variable demand are likely to maintain a certain amount of excess capacity as a normal condition.

The increase in the demand for finished products must be reasonably certain of continuing for a sufficient time in future and not be of a temporary character. No producer is going to respond to an increase in the demand for his product by ordering more capital equipment if he believes this increase to be only short-lived (as is the case with the consumer demand in the Easter month or Christmas week).

In recent times in spite of some of the weaknesses and limitations of the principle of acceleration, it has become an extremely popular tool for the analysis of the phenomenon of trade cycle. Prof. J. R. Hicks in his book *A Contribution to the Theory of Trade Cycle* has advanced an explanation of the trade cycle in terms of the accelerator.

Hicks' theory of trade cycle is based upon the following fundamental assumptions:

1. He assumes a progressive economy in which autonomous investment is increasing at a regular rate.

2. The saving and investment coefficients are such that any displacement from equilibrium results in a movement away from equilibrium though this movement may be lagged.

3. There is a constraint on the upward expansion of the economy provided by the "full employment ceiling".

4. Though there is no such direct constraint on the contraction, yet the "transformation" of the accelerator in the downward (i.e. disinvestment cannot exceed depreciation) provides an indirect constraint.

These assumptions are diagrammatically represented in the figure below.

AA represents autonomous investment which is assumed to be growing at a constant rate g .

EE indicates the equilibrium path of output which depends upon AA and is deduced by applying "super-multiplier" to it.

FF represents the full employment ceiling which is assumed to grow at the same rate at which AA is growing.

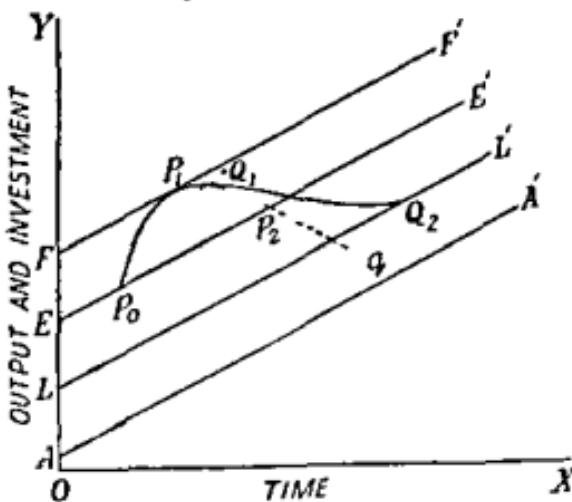


Fig. 6

LL represents the lower equilibrium path of output or the "floor"

Now let us see how given the assumptions the acceleration effect flowing from an initial increment of investment results in cyclical fluctuations in income and employment

Until P_0 the economy moves along the equilibrium path of output EE. But suppose at P_0 there is a burst of autonomous investment following say an invention. Although after the burst is over autonomous investment falls back to its old level yet on account of the explosive saving and investment coefficients as assumed in the theory the path of output moves steadily away from EE.

But the upward expansion cannot continue indefinitely. Sooner or later the path of output hits the full employment ceiling such as P_1 and so the path of output turns down. But it does not turn down immediately after hitting. For sometimes it creeps along the ceiling. This is because the 'lagged' effects of the induced investment At the point it hits the ceiling maximum effects of the induced investment of the previous periods have not been realised as yet so it will creep along the ceiling until these effects have been exhausted. The moment these are exhausted the path of output starts moving downward and the downswing of cycle begins.

Once output starts falling it can no longer remain even along the equilibrium position. This is because of the history of past investments. In the initial periods 0-1-2 induced investments are such as raise output above the equilibrium level. When the system is bumping against the ceiling induced investment is just enough to maintain output along the equilibrium path and in the last few periods when output starts falling current investment is below the level at which output can be maintained at the equilibrium level. By the time the fall in output reaches the equilibrium point induced investment belonging to the initial periods 0-1-2 becomes very weak whereas the force of investments in the rest of the periods together is not such as to sustain output at the equilibrium level. Hence output must decline below that level.

Now the crucial question is what the character of the downswing would be and whether the downward movement has a bottom below which it cannot go. Hicks shows that the working of the accelerator on the downward path is not the same in character as on the upward path. In fact on the downward path there is a transformation of the accelerator. If the accelerator functions in the same way both in the upswing and downswing then the fall would be a steep one as shown by QP₁Q₂. But in reality disinvestment is limited by the rate of depreciation so that the fall in output is slower but prolonged as indicated by Q₁Q₂. The place of the accelerator is now taken by some-

thing analogous to the downward revision of AA because investment now consists of autonomous investment minus the constant rate of depreciation. This is like a downward revision of the autonomous investment line AA. Thus since gross investment cannot fall below zero the fall in output cannot go on indefinitely as in $Q_1 P_2 q$. The slump must have a bottom and this floor is provided by LL. The line LL is deduced by applying the multiplier to the downward revised AA and this shows equilibrium output corresponding to that lower level of AA.

Once the output path reaches LL it does not turn upwards immediately—it creeps along LL for sometime. This is because of the existence of excess capacity. Once excess capacity is exhausted the positive acceleration effect comes into operation again and the cycle can be repeated.

Thus Hicks provides a satisfactory explanation of the turning points as well as of the periodicity of the cycle. Since the system has a ceiling and a floor output and income change, will oscillate between these two limits as the pendulum of the clock moves between the two limits. The very existence of the ceiling and floor ensures some sort of periodicity which may not be regular under all circumstances. At the lower turning point Hicks makes a significant contribution to the theory of trade cycle by showing how excess capacity in capital equipment operates in delaying the upswing.

In spite of these merits the Hicksian theory of trade cycle suffers from some serious weaknesses. As Prof. Kaldor has aptly pointed out in an article in the *Economic Journal* (1954) the greatest vulnerable point of the Hicksian theory is the use of crude and misleading acceleration principle. The acceleration effect presupposes the constancy of the capital output ratio. But in reality during cyclical fluctuations the capital output ratio is subject to significant changes. Similarly the acceleration principle presupposes the absence of excess capacity in capital equipment. But the industries which are subject to cyclical fluctuations are likely to maintain excess capacity in plant and equipment as a normal rule. Secondly the explanation of the phenomenon of trade cycle furnished by Hicks is highly mechanical and in real world the movements do not take place so mechanically as Hicks has portrayed. In particular Hicks fails to emphasize the psychological forces arising out of uncertainty and expectations which play a crucial role in a dynamic capitalist economy.

POINTS TO REMEMBER

1. The principle of acceleration states that as investment is a function not of the absolute level of consumption but of the rate of change of consumption a small change in consumption leads to a multiple increase in investment.
2. The size of the acceleration coefficient depends upon the capital output ratio and the durability of the capital equipment. The

Q. 16 Examine critically the over investment theory of business cycles (Karnatak 1960)

On what grounds would you regard the monetary the under consumption, and the over-investment theories, taken independently, as inadequate explanations of the phenomenon of business cycles? Indicate whether, and if so how, they could reconcile (Delhi 1957)

Ans The over investment theory of trade cycle has been advanced by writers like Hayek, Robbins, Mises, Spiethoff, Cassel and Wicksell. The over-investment school of trade cycle consists of two branches. The monetary overinvestment theorists like Hayek, Mises and Robbins hold monetary factors to be primarily responsible for overinvestment and trade cycle. The non-monetary branch of overinvestment school consisting of Cassel, Schumpeter, Spiethoff and Wicksell emphasizes technical and institutional factors like inventions, discoveries, opening of new channels of trade, new sources of raw materials etc, as the causal forces in the phenomenon of trade cycle.

According to the monetary overinvestment school, the upswing begins when the *market* rate of interest falls below what Wicksell described as the *natural* rate of interest. The demand for credit increases and the level of money investment rises. As there is usually a time lag between the inflow of investment and the outflow of output, the increase in investment does not immediately lead to an increase in output. On the contrary, the increase in investment leads to a rise in prices and the rising prices by increasing profits stimulate further investment. Thus a process of cumulative expansion begins sustained by credit expansion and inflationary rise in prices.

So far the explanation runs parallel to the purely monetary theory of trade cycle as formulated by Hawtrey. But according to the overinvestment school, the process of expansion also produces a distortion in the structure of production. This is the non-monetary or the real aspect of the theory. The capitalist structure of production is by its very nature capital intensive. In the upswing the capital intensity of the economy increases manifold. Certain contract incomes like wages, salaries and rent lag behind the rising prices. The rigidity of these incomes has the effect of curtailing consumption and imposing forced savings upon the community. The forced savings increase the supply of investible funds and the market rate of interest tends to fall. This combined with the artificial gap between the natural and market rates of interest stimulates further investment. As the rate of interest falls relatively to wages, capital intensive production becomes relatively cheaper than labour-intensive production—the capital goods sector becomes overdeveloped relatively to the consumption goods sector.

The seeds of the breakdown of the boom are to be found in this very phenomenon of the disproportionality in the structure of production. The credit disbursed by the banking system soon becomes

disposable income in the hands of the public. This increases the demand for consumption goods. The increase in the demand for consumption goods implies that the production of consumption goods becomes relatively more profitable than capital goods so that there is a diversion of investment from the capital goods to the consumption goods sector. Secondly, the increased consumption reduces the volume of savings and consequently the rate of interest tends to rise. This affects the capital goods sector more adversely than the consumption goods sector. Thus the shortage of capital (equivalent to undersaving or overconsumption) brings the boom to an abrupt end and the old arrangement in the structure of production is restored. Besides these the banking system after a certain point refuses to continue the process of credit expansion because of the danger of the collapse of the monetary system.

The breakdown of the boom induces a process of deflation and hoarding. Under the influence of general feeling of insecurity and pessimism the firms as well as the public seek to strengthen their liquidity position and there ensues a process of cumulative downswing.

The overinvestment theory of trade cycle suffers from a series of serious limitations. In the first place, the theory is based upon the implicit assumption of full employment. But it is much more realistic to start with a condition of unemployment. In such a case the effects of expanding bank credit would be very much different from those postulated by the overinvestment school. Secondly the concept of forced savings which is the heart of the analysis is based on the premise that consumption must be curtailed if the capital goods sector is to expand. Suppose however that widespread unemployment prevails at the time banks advance credit to businessmen. Under these conditions it is possible to expand simultaneously both the capital and consumption goods sectors. Prices of goods and services need not rise and forced savings need not be created for financing investment in the capital goods production. Thirdly, the overinvestment school overestimates the influence of changes in the rate of interest upon the character of production and level of investment. Neither the level of investment is so responsive to changes in the rate of interest nor is the capital intensity subject to instantaneous fluctuations in response to small changes in the rate of interest. Finally the theory does not touch the originating cause of the trade cycle. Why is it that the market rate of interest falls at any time below the natural rate and rises above the natural rate at another time? The theory does not furnish any satisfactory explanation. Similarly the theory does not explain the marked periodicity of the booms and depressions. Thus the theory is an inadequate explanation of the phenomenon of trade cycle.

The under consumption theory of trade cycle is associated with the names of Malthus, Sismondi, Hobson, Foster and Catchings.

The central theme of the underconsumption theory is that depression is caused by oversaving, the root of which is to be found in the unequal pattern of distribution of income particularly in the capitalist society. The high propensity to save of the higher income classes creates a deficiency of aggregate demand. The prices fall, profits are reduced and thus a process of cumulative contraction begins.

But how does the crisis start at all? How does the boom come to an end and give place to the depression?

During the boom encouraged by rising prices and profits huge investments are made by the entrepreneurs in the production of capital goods. But the capitalist process of production is by its very nature time consuming. Therefore the output of consumption goods does not rise immediately. Prices remain high and profit margins persist and there is a constant stimulus to investment. But after the *gestation* period the *consumable goods begin to pour into the market*. But the demand remains inadequate to absorb the increased supply of consumption goods on account of the natural lag between the rising prices (and profits) and wages. The market of consumption goods is glutted, their prices fall and thus the boom comes to an end and the downswing begins.

The underconsumption theory is an incomplete explanation of the cyclical fluctuations in income and employment. It explains only the phase of depression, it does not provide any explanation of the boom. Neither does the theory advance any reason for the marked and regular periodicity of the cyclical movements.

Thus taken independently both the overinvestment and underconsumption theories are inadequate explanations of the trade cycle.

At first sight it would appear that the two are widely different and the differences are irreconcilable. The underconsumption theory emphasizes the unequal distribution of income—an institutional factor as the cause of the depression. The overinvestment theory on the contrary emphasizes the monetary and technical factors as the cause of the cyclical fluctuations. Secondly, insofar as the explanation of the breakdown of the boom is concerned the two theories are poles apart. According to the overinvestment theory the boom comes to an end on account of abundance of the demand for consumption goods and the consequent shortage of investible capital. According to the underconsumption theory on the other hand the boom gives birth to the depression because of the deficiency of demand for consumption goods.

But it is not difficult to reconcile the two apparently dissimilar theories. As Prof Haberler has rightly pointed out both the theories contemplate a maladjustment in the structure of production. The allocation of resources does not correspond to the monetary demand

for the output of the different sectors of the economy. More precisely, the pattern of production does not correspond to spending and saving. But these maladjustments are not of the same order. The top of the structure of production according to one theory, the bottom according to the other is overdeveloped relatively to the flow of purchasing power. In a sense both the theories can be described as overinvestment theories. To the underconsumptionists, investment is excessive in relation to the consumer demand. According to the overinvestment school investment is excessive relatively to the supply of capital.

In respect of one feature the two theories are complementary. According to the underconsumptionists, lag between wages and prices increases profits and thus stimulates investment. According to the overinvestment school, investment is stimulated by a fall in the rate of interest caused by increased forced savings. The lag between wages and profits is implicit in the concept of forced savings. The overinvestment school will probably welcome the idea of increased profits caused by *wage prices differential* as a factor reinforcing the cumulative process.

The monetary theory of trade cycle has been advanced by Prof R G Hawtrey. According to this theory trade cycle is a purely monetary phenomenon and is caused by monetary factors only. As Hawtrey has put it 'The boom and depressions are the replica inflation and deflation respectively.' The boom is brought about by a fall in the bank rate which induces the dealers' to hold more goods. They place orders with the producers for more goods—the scale of production expands and income and employment increase. The depression is similarly caused by a rise in the bank rate.

The purely monetary theory taken by itself is also an inadequate explanation of trade cycle. If it is true that the trade cycle is caused by monetary factors only it follows monetary policy has an effective influence upon the course of the trade cycle. This however is not borne out by experience. For instance during the depression of the thirties the Federal Reserve System carried the process of credit expansion to fantastic extremes but without any effect upon the depression. This clearly shows that there are non monetary factors which are beyond the control of the monetary authority.

The monetary theory of trade cycle can be easily reconciled with the underconsumption and overinvestment theories. In the overinvestment theory the monetary branch of the overinvestment school clearly emphasizes the role of monetary factors. The boom is brought about by the market rate of interest falling below the natural rate of interest. Similarly the depression is caused by the market rate of interest rising above the natural rate of interest. The underconsumptionists do not explicitly emphasize the role of monetary factors but monetary factors can be introduced as additional factors reinforcing the cumulative process.

POINTS TO REMEMBER

- 1 According to the overinvestment theory the upswing is caused by the market rate of interest falling below the natural rate and the downswing is caused by the reverse movement. The theory is inadequate as it is based on the assumption of full employment and it is incapable of explaining the periodicity of the trade cycle.
- 2 According to the underconsumption theory the cause of trade cycle is the peculiar nature of capitalist production and the unequal distribution of income. The theory is inadequate as it explains only the depression.
- 3 According to the pure monetary theory booms and depressions are caused by changes in the bank rate. It is also an incomplete theory as it ignores important psychological, technical and institutional factors.
- 4 All the three theories can be reconciled. The overinvestment as well as underconsumption theories can be described as 'overinvestment' theories in a special sense. The monetary factors can serve as complementary factors in both the theories.

SELECT READINGS

- 1 Haberler *Prosperity and Depression*
- 2 Estey *Business Cycles*
- 3 Rimbard *Theory of Business Fluctuations*

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Q 17 Explain the concept of forced savings. How has this concept been used in explaining the occurrence of crises?

(Gujarat 1960)

Give a brief account of the saving process. Should saving lead to deflation and to economic stagnation?

Ans. It is remarkably amazing that such a simple phenomenon as that of the process of earning, spending and saving should be a matter of dispute. In the pre-Keynesian era there does not seem to have been a lucid conception of saving and the economic significance of the process of saving. There did not exist a clear cut distinction between the micro and the macro consequences of certain economic activities like consumption, saving and investment. It was just presumed that saving is an unquestionable eternal virtue. Thrift was extolled for its own sake and parsimony was held in the highest esteem particularly because it was a religious injunction. It was within the publication of the *General Theory* in the year 1936 that a searching analysis appeared on the scene regarding the conception of income, the meaning of consumption, the process of saving, the significance of the process of saving and investment and the logic behind the cycle of exchanges constituting the net work of the

economic process. One has to understand and appreciate the meaning and significance of the process of saving before attempting an analysis of the conception of forced savings.

Savings ordinarily would mean the excess of income over consumption. So far as I know everyone agrees in meaning by saving the excess of income over what is spent on consumption.¹ The quarrel over the meaning of saving therefore could arise only regarding what is meant by income. For example Prof. Robertson maintains that income in this context should mean disposable income which was earned yesterday and is available for spending today. Keynes himself had changed his stand from the *Treatise* to the *General Theory*. In the *Treatise* Keynes did not include in income windfall profits or losses and took account of only normal profits. In *General Theory* however, he defined income as inclusive of all receipts from whatever source in a given period and therefore windfall profits or losses were to be reckoned as part of income or were to be excluded from it. However the question of income decides only the problem of defining saving and not the problem of forced saving.

Forced saving should mean according to commonsense saving which was not planned by the savers but which had to be made by them because of the circumstances out of their control. But this forced saving has no meaning until we have specified some standard rate of saving.² What is a standard rate of saving? It will be also impossible to give a figure in absolute terms or in percentage of income. Nor is it possible to link the concept of forced saving with that of subjective sacrifices of pains and pleasures. Prof. Hayek in his

Note on the Development of the Doctrine of Forced Saving, (*Quarterly Journal of Economics*, Nov 1932) gives the view that in earlier days forced saving was associated with the concept of full employment. Bentham had introduced the concept of forced saving stating how the people would be forced to save if there was already full employment. Because of the extreme of full employment investment cannot increase output and results only in compulsory saving on the part of the community. Some similar ideas were in the minds of later economists also. Keynes points out that perhaps it is good if we define forced saving as the excess of actual saving over that saving which 'would be saved if there were full employment in a position of long period equilibrium'.³ In other words Keynes says that with the existence of full employment a certain amount of investment and hence saving is necessary to maintain that equilibrium. If the situation is therefore of over full employment due to the excess of investment forced savings will take place. On the other hand if full employment is not reached due to the deficiency of investment there will be less of savings as compared with

1 Keynes (J M) *General Theory*, p 74

2 Ibid p 80

3 Ibid p 80

full employment savings. Thus if the standard rate of saving is chosen as that rate which will be obtained at full employment equilibrium, Keynes says we are able to get a proper definition of forced saving. He hastens to add further that in such a case positive forced saving would be a rare phenomenon because seldom does an economy reach over full employment state and at any rate such a situation will not be stable. We shall be only having negative forced saving if there can be any such thing.

The idea of forced saving has been used in modern times in the context of underdeveloped countries also. Here the context is always real saving out of real income so as to make more of real investment possible for increasing capital formation in the country. It is quite clear that with the advancement of an economy capital stock of the community has to increase and this increase can take place only if out of current income more is saved. The question as to whether the average rate of saving should increase or decrease is immaterial so long as the current savings increase over the usual saving figure. However, with greater savings it is supposed to be possible to have quicker economic development and with smaller savings slower economic development. It is now a-days recognised that for the development of a country in some form or other the savings have to be increased. But the question arises which savings will be termed as forced savings in this context.

Probably the best way to define forced saving will be to betnote that part of saving as forced saving for which there was no intention of the community to save. Thus on this basis it will be possible to force saving in the community by increasing investment prices and through other measures. In the context of underdeveloped countries for example savings may be forced out of people by a State decree or the people may be forced to save more through increased prices. In an economy prices are determined by the flow of goods and services and the flow of money demand and the share of any individual or group of individuals will be determined by the amount of money demand commanded by that individual or group as a proportion of total money demand. Therefore in the existing flow of money demand if the government injects more of money through deficit financing etc. people will be able to get only a smaller share as determined by the extra purchases made by the government. Such a phenomenon is a common sight during financial stringencies of governments e.g. during a war when the government takes away forced loans and injects additional money supply into the economy. As a result some portion of the national output is diverted towards the use of war purposes and the people are left with a smaller amount of goods and services.

The same phenomenon can be observed even in situations when the Government is not trying to inject more of purchasing power in the economy but the process is taking place due to increased invest-

ment. Here we can think of forced savings either in the context of a situation where our definitions of savings and investment can permit a divergence between the two, or we have to introduce the distinction between *ex ante* and *ex post* savings and investment. Usually the idea of forced savings was associated with the situation when investment could be different from savings as in Robertsonian sense and in the *Treatise*. In such cases whenever investment is greater than savings there is an excess of expenditure leading to a rise in the prices and hence of savings. Here forced savings are obviously taking place because of the forces of increased money supply in the face of rigid real income, that is to say investment is turning out to be only a monetary phenomenon not resulting in full increase in the real income otherwise prices would not have risen and forced savings would not have been there. However, such a situation cannot be maintained indefinitely (First explanation of crisis because of forced saving). On the one hand the investors looking at the rising prices and money profits will be trying to increase investment and on the other hand rigidity of real output would be forcing the people. The boom will have to collapse. With the distribution of income becoming more and more in favour of profits it will not be possible to maintain the money demand for the production and ultimately the investors will be faced with a crisis in which they will not be able to sell their production at the anticipated prices. Investment will have to decline due to this crisis and depression may ensue.

Keynes however, points out that it is not necessary to proceed in our analysis on the above stated basis. He says that we need not proceed on the basis of inequality of saving and investment. If we measure our categories in terms of wage units then any increase in investment will mean increase in real investment and employment and hence real income out of which savings would be coming. Thus there is no question of any forced savings so long as increased real saving is always to come out of increased real income (Second explanation of crisis which is *without* forced savings being there). But even in such a situation with rising investment, marginal efficiency of capital would be falling and with rising income marginal propensity to consume will be falling. Thus though people would not be forced to save more since additional savings would be coming out of additional income still aggregate demand will not be able to keep pace with aggregate supply leading to cessation of investment process and crisis. Here the crisis could be averted by increasing investment still further to fill up the gap in aggregate demand.

[Third explanation of crisis is again with some sort of forced saving] But we can introduce a modification in terms of *ex ante* and *ex post* concept of savings. Investment and savings are always equal only in the *ex post* sense but not necessarily in the *ex ante* sense. And here we get a clear cut explanation of what fluctuations in income should take place when *ex ante* savings are not equal to *ex ante* investment. If people plan to invest more than

they plan to save naturally income will go on expanding. Hicks has made use of this inequality between planned savings and planned investment in his *Contribution to the Theory of Trade Cycle* to explain how when the two differ income will go on fluctuating. If planned investment is greater the income will increase in the next period if planned savings are more, the income will decrease in the next period. Here however forced savings are the result of the increased income and not the cause. Similarly reduced savings will be the result of reduced income and not the cause.

In a free society each individual has the liberty to plan and distribute his income as between consumption, saving and investment in accordance with his own scale of preferences. Normally the disposal of income in one way or the other is done by the individual entirely on a voluntary basis. Should the individual however be forced to earn less and consume less because of rising prices in the face of fixed money income or should the individual be compelled to restrain himself because of the coercion employed by the state directly as in a Communist State or indirectly as is done in a democracy through deficit financing and the release of inflationary pressures what appears in innocent voluntary process turns out to be an oppressive mechanism to curb the liberties of the individual in order to dictate to him as to how he should distribute his income between consumption and savings.

POINTS TO REMEMBER

- 1 The concept of forced saving is linked with the definition of income as well as a standard rate of saving.
- 2 Savings at stable full employment should be the standard as taken by Keynes though in such a case, the possibility of forced savings will be a rare thing. The concept of forced savings can be used in underdeveloped countries also.
- 3 The best definition of forced saving would be saving which was never intended and which cannot be avoided. This may be due to increased prices or compulsory reduced consumption.
- 4 We get three explanations of crises in terms of forced savings. If savings are being forced by rising prices distribution of money income in favour of profits will make the money demand lag behind and cause a crisis.
- 5 In second explanation we need not introduce forced saving by assuming that saving is always equal to investment. Here the crisis is explained by falling marginal propensity to consume and falling marginal efficiency of capital.
- 6 In third explanation we distinguish between *ex ante* and *ex post* concepts. Here existence of forced savings will mean no crisis. The crisis will come when *ex ante* savings are more than *ex ante* investment.

SELECT READINGS

- 1 Keynes, J M *General Theory*, Ch VII
- 2 Hayek 'Note on the Development of the Doctrine of Forced Saving', *Quarterly Journal of Economics*, Nov 1932
- 3 Harris, Seymour E. *The New Economics*, Ch XLIII

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Q 18 Recommend a suitable fiscal policy to curb the instability generated by inflation (Karnatak 1960)

Discuss the case for and against using wage cuts to get out of a depression (Punjab 1959)

Suggest some practical scheme for securing stability of prices and point out its psychological and institutional implications (Allahabad 1959)

What are the monetary and fiscal 'built in stabilizers'? How far can they be relied upon in preventing cyclical fluctuations? (Gujarat 1958)

Ans Economic development through the process of industrialisation under the auspices of capitalism has brought into existence the problem of chronic instability because of the periodical alternation of the ups and downs of business which causes unhealthy dislocations in the economy from time to time. The unplanned, uncoordinated economic activities of a large number of entrepreneurs lead to the occurrence of periodical crises when the economy goes out of gear throwing employment, output, consumption, saving, investment etc out of tune with the requirements of the community. Most staggering is the fear of a depression which brings about a fall in prices, a shrinkage of profits, a slump in investment, a dwindling of employment opportunities a cut in the general level of incomes, a deficiency in the aggregate demand etc, leading to a miserable state of economic affairs. The industrialised economies are eternally worried as to how to stabilise economic activities at a high level of employment and output. Instability is inherent under the rules of unbridled *laissez faire* and unless appropriate institutional modifications are introduced, it would be exceedingly difficult to face the periodical ups and downs.

The differences regarding what lies at the ultimate root cause of trade cycles were bound to be there, but there is almost general agreement as to the general process that the trade cycles take. They are agreed as to the course which a trade cycle in general takes in its upward and downward phases and there seems to be also a general agreement as to the forces which aggravate the upward or the downward process. In the rising phase demand rises quickly, wages rise but lag behind rising prices and profits, demand in general is more than supply, while just the reverse happens in the downward phase.

However, in the economy there are often certain built in mechanisms which themselves may not be able to generate a reverse process but which are certainly very helpful in checking the speed of the movement. Such mechanisms in the economy are called built in stabilizers, meaning thereby that when the economy is passing through a rising phase of the trade cycle, they try to pull it back and while the economy is in the depression phase they try to pull it up. Such 'stabilizers' naturally should go against the general trend of the working of various economic forces in the economy if they are to be effective. In the rising phase for example, when purchasing power is increasing all round the built in stabilizers should be able to reduce the availability of purchasing power to the public and preferably to the potential spenders. In the falling phase of trade cycle the, 'stabilizers' should be able to inject more of purchasing power and revive demand.

An example of such a built in stabilizer is income tax. In most of the countries income tax has a progressive structure. Even if income tax were proportional, it is quite clear that with rising income income tax would go on increasing leading to increasing appropriation of a part of income by the State. In the case of progressive taxation, the tendency is strengthened further. However, just taxing away a part of the income does not suffice, it is necessary that this taxed income should be shunted out of the purchasing power flow of the economy which the government may be doing through surplus budgeting etc. On the other hand, in the case of a depression, automatically with declining income taxation goes on decreasing leaving comparatively more purchasing power with the people. In the olden days when income tax usually was not there, or formed only a negligible part of the income or was even regressive in certain cases, its built in stabilizing capacity was naturally best. However, these days it is difficult to find an example in which income tax is not acting as a built in-stabilizer. In the list of built in stabilizers we can add certain devices of a modern welfare State primarily designed to help the common people when they are in need. The case of unemployment insurance is in point! With rising income and employment, unemployment benefits automatically go down and contributions to unemployment funds go on rising, while with the falling employment the payments out of these funds increase—thus ensuring a sort of automatic adjustment of the flow of purchasing power in the light of the needs of the economy. Another example is of price support policy adopted in the case of certain industries. We have seen the example of agricultural price support policy of the U.S.A. Government where it guarantees to purchase different agricultural commodities at certain minimum prices. Such a policy, when prices are falling, ensures minimum prices to the producers with the result that producers do not cut down their investment and employment abruptly, thus supporting a general lifting up of the economic system. Further when prices rise, the Government releases the stocks of the

commodities purchased during "bad" times thus preventing a speculative rise in prices

However it has to be remembered that these built in stabilizers are often mild in their *effectiveness*, unless they cover a major sector of the economy. In the U.S.A. it is claimed that since Second World War, most of the slumps have been automatically corrected without much of governmental help but we must remember that in the U.S.A. the above mentioned three built-in stabilizers are at work in a major way. People pay a major portion of their income in taxes, unemployment benefits are in operation and agricultural price support policy is well known throughout the world. Clearly if only a very small portion of population is subjected to income tax, if the rates are low and similarly if the Government has not very substantial social security programmes, there will not be enough of automatic squeezing out or injection of purchasing power in the economy. Similarly if the government is trying to interfere for price stabilization it must cover major sectors of the economy and not concentrate upon unimportant things. Above all, it has to be remembered that built-in stabilizers work only in a simple way. The actual situation is always much more complex and needs an intricate treatment. An economy if it is not very sensitive to changes in some of its sectors will not respond quickly enough to built-in stabilizers working in some of the sectors only, while if it is sensitive it is bound to be a complicated affair and will definitely need various checks and balances at several points. If built in stabilizers alone had been enough, the problems of inflation and deflation would not have been bothering the governments so much. In order to have a realistic policy we need a thorough controlling system of the economy's various organs - financial, monetary and others.

For example, when we are faced with inflationary pressures, various other fiscal measures will also be needed. We have already seen that to some extent fiscal measures in the form of income tax, unemployment insurance and other social security measures are quite helpful though often inadequate. We need not repeat how these built-in stabilizers which form a part of the fiscal measures work. As was pointed out it is not enough that these built in stabilizers should be at work. With rising prices there will be demand for rising wages, which if granted will raise the cost of production still further and thus will generate a cost price spiral. In order to check it, it is necessary that money wages should be kept in check. Also in order to discourage excessive investment the government should levy extra taxes on profits and other incomes and should try to have surplus budgets. In the foreign trade field, the efforts of the government should be to have a deficit so that the foreign trade multiplier works in the direction of reducing money incomes of the people. Ordinarily if exchange rates are pegged, with rising prices in the home country in the face of comparatively low prices in the foreign markets, exports will be discouraged.

and imports will be encouraged. But it may happen that special efforts are needed to curb the inflationary pressure especially when the foreign countries are also afflicted by it. In such a situation, the reduction of import duties and enhancing of export duties is admirable. In one word what is required is increasing flow of goods and services and decreased flow of purchasing power in the economy.

There has to be a reversal of these measures in the depression phase of the business cycles. One of the important steps is to raise wages so as to bring about an increase in the purchasing power of the workers. But here it is feared that wage increase will mean increased cost and hence reduced profits leading to discouragement of investment.¹ The classical economists believed that by reducing money wages of the workers it will be possible for the employers to employ more of them and thus the economy will reach full employment, while Keynes says that a reduction in money wages would mean reduction of effective demand by almost the same proportion which would mean no increase in marginal efficiency of capital and hence no encouragement for investors. Accordingly, Keynes recommends in case of a wage cut we should try to encourage consumption and investment through other measures.

Coming to fiscal and monetary measures in general we find that the primary aim of the government should be to stabilise the economy at a high level of employment and income (which does not mean that the economy will not be allowed to progress in terms of income, but that efforts would be made that it should not decrease or should not increase in a manner which would inevitably lead to a fall). This does not imply absolute stability in a rigid manner. A modern economy is so complex by its very nature that it would be impossible to achieve this, probably it would not be advisable to do so, since after all economies progress only if their parts are allowed to move. Stability, however, here would mean no abrupt change in any of the major aspects of the economy - income, employment, output and prices. Various measures fiscal and monetary have been suggested for this and we shall go into them.

We have already analysed the built-in stabilizers which are also called anti-cyclical measures. The most important task of these, as pointed out, is to regulate the flow of purchasing power in the economy so as to correspond to the flow of goods and services at high level of employment and income. Here special reference should be made of the fact that in order to have a good anti-cyclical policy it is necessary to maintain not only an over all balance of demand

¹ The controversy whether wage cut increases employment etc. or not and thus, whether it pulls the economy out of depression has been dealt with in great detail in another question. The student is advised to turn to that question if a detailed discussion is needed.

and supply, but also various sectoral balances. For example, when the government decides to have a deficit budget, it is decided that some purchasing power is to be injected into the market, but the net effect of this injection will depend upon its quantity, its speed and the way it is injected and the sector in which it is injected. If for example the extra purchasing power is distributed in the form of extra wage income to the workers (especially those who were hitherto unemployed) the result will be a sudden rise in the demand for such necessities as food, clothing etc. On the other hand if the government uses that money to increase the pay of its officers probably the increased demand will be felt for cars and houses. It is quite essential therefore, that the increased purchasing power should flow in those hands which are most likely to create requisite demand both for unsold stocks at present as well as for unutilized capacity of various industries. Sometimes the government may itself have to undertake various investment projects in hand in order to generate additional employment and demand and to convince the private investors of the profitability of investments. Faced with the complexity of the issue Keynes declared "I conceive therefore, that a somewhat comprehensive socialization of investment will prove the only means of securing an approximation to full employment though this does not exclude all manner of compromises and of devices by which the public authority will cooperate with private initiative." In this connection it has to be remembered that a comprehensive control of investment would imply a comprehensive control of financial and monetary system of the economy. Ordinarily it is thought that probably during depression lowering of bank rate and a general easing of the money supply should suffice with at the most occasional selective credit controls. But actually a much thorough regulation of the country's monetary and financial institutions is necessary. Truly regulation of bank credit alone does not suffice. Especially in the depression period investment will not revive simply because loans are easy to have. The investors must feel that it is profitable to invest and secondly when profit prospects are high investors are apt to find various ways of crossing the hurdles put in their ways through monetary controls. The recent Radcliffe Report has brought to the forefront the various ways in which checks on banks for tightening the bank credit may not suffice. We may be able to check the flow of bank credit but the people have other sources of finance. If therefore the economy is to be regulated not only bank money but the whole financial structure of economy needs controlling.

This brings us to the pertinent question of psychological and institutional implications of these anti-cyclical measures. As far as the psychological aspect is concerned, we must be in knowledge of the reactions of investors and consumers to various measures taken by the state. It is necessary to know how the investors react to various changes in the tax structure, changes in the cost structure and how they interpret the various investment opportunities presented before them.

In other words, we must know on what major factors in upon efficiency of capital depends and which of the determining factors has how much share in it. Further it is to be found out as to what extent the economy is beset with various rigidities in the form of complementarities and specificities of technical or other nature. The less the technical specificities and complementarities of the factors involved the easier it will be to push the economy out of a depression or prevent it from inflation. In the absence of rigidities it is not so much necessary to work out in detail the effect of the impact of the governmental policy and their subsequent results—in other words, the problem of sectoral balances become less troublesome. However more troublesome than technical rigidities will be the social rigidities in the form of non competing groups etc. Prof. Kaldor in one of his famous articles has pointed out that it is easy to reach full employment through various anti depression measures but it is almost impossible to stabilise the economy there. The anti cyclical measures imply the absence of all kinds of rigidities.

Talking further of the implications we can mention the implied existence of money illusion. This psychological factor has a great importance in practical policy. For if it is there it will be possible to reduce real wages without reducing effective demand and money profitability of investment. In other words it will be easier to get the economy out of depression and if it is not there and the workers demand a certain level of real wage depression cannot be remedied through a cut in real wages the methods employed will have to be increase in consumption and direct investment by the government. Similarly the exact selection of monetary fiscal and financial regulation of the economy will depend upon the institutional structure of the economy. In a developed country there is an economic deficiency of aggregate demand mainly due to great inequalities of income leading to under consumption on the part of the rich and there is a lack of over all co ordination of economic activity. There has to be an integration of the government budget with that of the budget of the nation in the interest of economic stability. In a backward economy, this integration has to be done in the interest of economic development in order to release disequilibrating forces towards the growth.

POINTS TO REMEMBER

1. Trade cycles are mainly a feature of developed free enterprise economies and there is a general agreement as to the forces which aggravate the upward and downward movement of the economy.
2. In most of the modern free enterprise economies there exist built-in stabilizers e.g., income tax, social security and price supports.
3. But their effectiveness depends upon their strength and direction and support by other measures. Simple working of 'stabilizers' should be supplemented by intricate regulations of the economy.

- 4 In the inflationary phase the government should try to check rise in cost wages and prices through direct steps and selective credit control and through budget surplus and taxation. Investment should also be discouraged. Deficit balance of trade should be tried for. In the deflationary phase above measures should be reversed but money wages should not be cut or raised. Consumption and investment should be encouraged.
- 5 However, throughout the government must try to maintain sectoral balance as also. For this a thorough regulation of the country's monetary and financial institutions is required. These days, probably controlling the financial institutions is becoming more important than controlling of banks alone. We should try an overall stability and not absolute stability of each sector.
- 6 For the success of the anti-cyclical policies psychologically the investors and consumers shall respond in the right way, and the response should be known to the government. Confidence in the governmental ability should be there. Technical and social rigidities should be the minimum possible.

SELECT READINGS

- 1 Keynes J M *General Theory* Ch XXVI
- 2 Matthews R C O *Trade Cycle*
- 3 Friedman Milton A Monetary and Fiscal Framework for Economic Stability *The American Economic Review*, 1948
- 4 Hardy Charles O. "Fiscal Operations as Instruments of Economic Stabilization—*The American Economic Review*, 1948

Q 19 Bring out the significant leads' and 'lags' in a business cycle. How are they suggestive of a causal analysis (Poona 1960)

Ans Strictly speaking Keynes did not furnish any clear cut and ready made theory of trade cycle. In a chapter in his *General Theory* entitled 'Some Notes on Trade Cycles' he merely analysed some of the important features of the phenomenon of trade cycle. As Prof Dudley Dillard has put it 'The Keynesian analysis is much more and much less than a theory of business cycle. It is more than a theory of business cycle in the sense that it offers a general explanation of changes in the levels of income and employment independently of the cyclical nature of the changes. It is less than a complete theory of trade cycle because it makes no attempt to analyse the various phases of the cycle in any great details.'

According to Keynes since the consumption function and the liquidity function are relatively stable changes in the levels of income and employment must be explained by the fluctuations in the investment function. The volume of investment depends upon the rate of interest and the marginal efficiency of capital of which the

former is a relatively stable entity. Thus Keynes settles down upon the marginal efficiency of capital or the prospective rate of return on the capital asset as the ultimate factor in causing the fluctuations in the levels of income and employment associated with the trade cycle.

The upswing of the trade cycle is brought about by an increase in the marginal efficiency of capital. The sequence of events following may be represented thus:

1. The increase in the marginal efficiency of capital raises the level of investment which in turn leads to an increase in output, employment and income.

2. Given the marginal propensity to consume a part of the increased income would be spent which would provide a further impetus to marginal efficiency of capital and investment. The tendency towards expansion is transmitted from one group to another group of industries and thus the whole economy through the 'multiplier effect' experiences a cumulative expansion.

3. The process of cumulative expansion cannot go on indefinitely. The increasing volume of investment requires an increasing supply of money and if there is some quantitative limitation on it, the rate of interest would tend to rise. This would arrest a further increase in investment.

4. But an inelastic money supply is not the only factor bringing about a halt to the upswing. As the economy reaches full employment and diminishing returns begin to operate, the prices would tend to rise.

5. The rising prices would ultimately affect the cost of production and at this point the marginal efficiency of capital collapses with a suddenness which may be catastrophic.

The pessimistic attitude towards the marginal efficiency of capital brings about a reversal of the trend and gives birth to the downswing. The downswing cannot also continue indefinitely. First, in a period of depression there takes place disinvestment or "negative" investment. In prosperous periods businessmen pile up heavy stocks of raw materials and in the early part of the depression the liquidation of these stocks is an important cause of disinvestment. When these stocks have been exhausted one reason for the decline in investment is removed. Secondly there are at any time certain projects of investment especially the renewal of plant for which funds have been accumulated and which will be undertaken in any case. Thirdly the continuing depression may induce the state to undertake a programme of public works. In these three ways a downswing may come to an end.

Keynes throws light upon a special feature of trade cycle namely that while the transition from boom to slump is violent and

sudden, that from slump to boom is very slow and gradual. This, according to Keynes, is due to highly conjectural character of the marginal efficiency of capital. The estimate of the marginal efficiency of capital is based upon the present experience. At the bottom of a slump when the losses are so much more common than profits the businessmen come to believe that no form of investment would yield any substantial return. And a long time elapses before they can be persuaded through the measures like easing of credit conditions to step up the level of investment. The mastering of the crisis thus lies in mastering the psychological crisis which is obviously a slow and gradual process. As Prof. Crowther has put it, 'The act of stopping a horse from drinking is necessarily sharp and sudden, to bring him to the water and persuade him to drink may be a much slower business.'

Keynes has also explained the observed periodicity of the boom and slump. The boom would continue until the resources are fully employed, prices rise and costs of production are affected. The entrepreneurs would react to it by reducing investment—this is the beginning of the depression. The period that elapses between the starting point of the depression and the beginning of the recovery is determined by two factors (i) the time necessary for the wearing out and obsolescence of the durable capital, (ii) the time that elapses before excess stocks which accumulate towards the end of the boom can be absorbed. It would also depend upon the counteracting measures undertaken by the government. Thus since the reversal is the result of an organic development and does not happen by accident, it naturally follows that it takes approximately the same time to work itself out on different occasions. Keynes estimates that the period of depression should not as a rule exceed 3 to 5 years in a modern industrial economy. He suggests that these movements were more characteristic of the 19th century than they are of the 20th. During the 19th century the tremendous forces of economic growth maintained the marginal efficiency of capital at a level which taken in relation to the rate of interest was high enough to permit variations between full employment and less than full employment. In the 20th century the slowing down of factors like population growth, geographical expansion and the accumulation of capital has rendered full employment virtually unattainable in any economy following the traditional policy of *laissez-faire*. The threat of secular stagnation has replaced the intermittent phenomena of business cycles.

POINTS TO REMEMBER

1. Keynes has not furnished any complete and clear cut theory of trade cycle. He merely attempts to shed light on some of the important features of the phenomenon of trade cycle.
2. According to Keynes the marginal efficiency of capital is the villain of piece. The marginal efficiency of capital is a highly psychological phenomenon and is subject to wide fluctuations.

3. The upswing is caused by a rise in the marginal capital and the consequent increase in investment. It comes to an end on account of either a rise in the cost of production or an increase in the cost of production.

4. The downswing is caused by a fall in the marginal efficiency of capital and the consequent fall in investment. The depression comes to an end on account of the end of disinvestment and the compensatory public investment.

SELECT READINGS

1. Keynes - *General Theory*, Ch. XXII
 2. Crowther, Geoffrey - *An Outline of Money*, p. 151-165

Q. 20 Explain the monetary causes of booms and depressions in industrial activities (Agra 1961)

The trade cycle is a purely monetary phenomenon. Discuss. (Karnatak 1960)

Do you agree with the view that monetary causes do not create the trade cycle but merely function as an aggravating factor? Give reasons for your answer (Gauhati 1960)

Discuss how far the monetary theory of the trade cycle offers an adequate explanation of periodicity and the turning points (Delhi 1960)

How, and to what extent, can business cycles be explained in terms of monetary factors? (Delhi 1959)

Discuss the part played by monetary factors in the development of the business cycle. (Karnatak 1959)

Discuss critically the purely monetary theory of the trade cycle. (Allahabad 1959)

"The trade cycle is a purely monetary phenomenon" Comment if recent investigations into the causes of the trade cycle bear this out. (Allahabad 1958)

Ans A purely monetary explanation of the phenomenon of trade cycle was furnished by the prominent monetary theorist R. G. Hawtrey. He propounded this thesis in a number of books he wrote, mention may particularly be made of the following

1. *Good and Bad Trade* (1913)
2. *Art of Central Banking* (1932)
3. *Capital and Employment* (1937)

Hawtrey insists that non-monetary factors such as crop failures, wars etc. may breed a partial depression in particular sectors of the economy but a general depression in the sense of the trade cycle cannot be induced by non-monetary factors alone. As Hawtrey has

put it, "The variations in the effective demand which are the real substance of the trade cycle must be traced to changes in bank credit."¹ Again, 'The trade cycle is a monetary phenomenon because general demand is itself a monetary phenomenon'.²

In the business activity of every advanced industrial economy credit plays a crucial role. But the credit system is highly elastic or as he has put it "inherently unstable"—it can be expanded or contracted at any time. According to Hawtrey, this instability of the credit system accounts for the phenomenon of trade cycle. As the bank rate constitutes the chief string of the credit system, the phases of the trade cycle depend upon the changes in bank-rate. Hawtrey maintains that changes in the bank rate exercise a very significant influence upon short term borrowing—the borrowing by 'dealers' who hold stock of goods with a view to be able to meet variations in consumer demand. As the major part of their business is financed by borrowed credit they are highly sensitive to changes in the bank rate.

The upswing of the trade cycle is brought about by an expansion of credit i.e., by a lowering of the bank rate. The sequence of events following a lowering of the bank rate can be presented thus:

1. The dealers are induced to hold a larger amount of goods. They place orders for more and more of goods to the producers.

2. The producers experience a buoyancy of demand. They also perhaps borrow credit from the bank and expand the scale of production.

3. The tendency towards expansion is transmitted from one group of industries to another. With the expansion of output, employment and income also increase.

4. With the increase in incomes, the consumers' outlay increases and the dealers find their stocks depleting. There results further orders to producers a further increase in productive capacity, in consumers' incomes and outlay.

These are two additional factors which aggravate the upswing. First as the economy tends to reach a state of full employment, prices begin to rise. The speculative motive of the dealers comes into operation and they are tempted to hold larger stocks to sell at higher prices later. Secondly, the velocity of circulation of money tends to increase both because of the briskness of trade and the speculation of the people. Since the value of money gradually falls people readily spend idle balances which may be at their disposal.

In short a vicious spiral of inflation fed by a continuous expansion of bank credit is set up.

1 Hawtrey, *Capital and Employment*, p. 64

2 Ibid, p. 65

But the process of expansion cannot go on indefinitely. The man made limitations imposed by law and custom are brought into play. The central bank in its anxiety to maintain price stability or exchange stability steps in and puts a check upon the credit system. But since the process of expansion after it has been allowed to gather a certain momentum can be stopped only by a jolt there is always the danger that expansion will not merely be stopped but reversed.

The downswing of the trade cycle brought about by a contraction of credit is no less cumulative than the process of expansion. The sequence of events in this case is—the dealers reduce their stocks, the producers experience a slackening of demand employment output and income shrink and thus a vicious spiral of deflation is set in. In the downswing the speculative motive of the consumers plays a more important role. As the prices are falling day by day (or value of money rising) the consumers postpone purchases in the hope of attaining better terms later and this aggravates the depression.

The process of contraction again cannot be permanent. The central bank ultimately intervenes and starts a policy of expansion of credit. This brings about a revival and the period of revival is readily followed by a boom.

Why do the upswing and downswing occur at regular intervals? Hawtrey contends that *periodicity* is not an essential feature of the trade cycle. The Gold Standard was primarily responsible for the periodicity of the trade cycle. Under the automatic working of the gold standard the length of the cycle was determined by the rate of progress of the processes on which the cycle depended the absorption of the currency during the period of expansion and its return during the period of contraction. Since 1914 the automatic mechanism of the Gold Standard has ceased to function and the previous marked regularity in the alternation of periods of prosperity and depression has gone with the Gold Standard.

In short according to the monetary theory the trade cycle is due to variations in the purchasing power of the community. As Hawtrey observes "The trade cycle is nothing but a replica of an outright money inflation and deflation". And for the occurrence of booms and slumps the bankers are responsible in the ultimate analysis. Indeed a single bank or banker cannot go very far but the banking system can. If one bank or a group of banks expands credit other banks will find their reserves strengthened and will be induced sometimes forced to expand too. In this way a group of banks can carry with it the whole banking system.

How acceptable is this monetary interpretation of trade cycle? The answer would depend upon what Hawtrey exactly means. If he means that trade cycle cannot be explained without the assistance of monetary factors, probably all would readily agree. That money

is not a mere veil and it plays a significant role in determining the nature and level of economic activity is a commonplace view in the modern economics. If on the other hand Hawtrey means to suggest (as he apparently does) that the monetary factors alone are sufficient for causing cyclical fluctuations it would be difficult to accept his theory on theoretical as well as practical grounds. At best the monetary theory is an incomplete explanation of the trade cycle.

In the first place the superstructure of the monetary theory is based upon the crude orthodox Quantity Theory of Money. As this is based on a host of unrealistic assumptions, the foundation of the monetary theory is extremely weak.

Secondly as has been rightly pointed out by Prof Harrod the theory does not touch the originating cause of the phenomenon of trade cycle. What starts the expansion or contraction? What forces induce the bankers to expand credit at one time and suddenly contract credit at another time? The theory does not provide any satisfactory answers to these crucial issues.

Finally granted that monetary factors are the *sufficient* cause of trade cycle it follows that the banking policy has a prompt and effective influence on the course of the cycle. This is not fully supported by monetary experience. In 1938 for instance the Federal Reserve System of America carried the process of credit expansion to fantastic extremes but all in vain. It did not have any appreciable influence on the business activity. This suggests that the monetary theory ignores technological and psychological factors and forces which play a significant role in the causation of the phenomenon of trade cycle.

In the recent literature on trade cycle the purely monetary approach of Hawtrey has been abandoned and more scientific explanations of trade cycle have been offered by Keynes, Robertson, Hicks and many others. According to Prof. Hicks whose theory is the most widely accepted one the trade cycle can be explained exclusively in real terms without invoking the monetary factors.

POINTS TO REMEMBER

1. *The purely monetary theory of trade cycle has been advanced by Hawtrey according to whom instability of credit is solely responsible for the cyclical fluctuations. The upswing begins with an expansion of credit and the downswing with the contraction of credit.*
2. *The upswing and downswing alternate on account of the intervention of the central bank necessitated by law and custom.*
3. *The periodicity is not an essential feature of the trade cycle. The Gold Standard was responsible for the regularity of intervals between the boom and depression.*

4 The monetary theory is at best an inadequate explanation of the trade cycle. It does not explain the root cause of the cycle. If the monetary factors alone are responsible for the cycle, the monetary authority should be able to control the business cycle. But this is not borne out by experience. It is clearly that there are other factors non-monetary in nature which are beyond the control of the monetary authority.

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- 1 Haberler, Gottfried *Prosperity and Depression*
- 2 Estey *Business Cycles*
- 3 Hahn George N *Monetary Theory*
- 4 Hawtrey R G *Capital and Employment*

Q 21 What is the relation of economic growth to fluctuations ? Do you agree with the view that the trade cycle is only a matter of the past ? (Bombay, 1960)

Is it true to say that economic growth always takes the form of cyclical fluctuations in output ? Examine in this context the influence of the factors of growth and the factors which produce oscillations

(Guja at 1978)

Ans The history of the advanced capitalist economies reveals that economic growth has been achieved through a series of cyclical fluctuations. It would be more appropriate to contend that secular growth has not been seriously hampered by the recurrent ups and downs characterising the course of economic development of the modern industrially advanced countries living under a democratic set up. There certainly have been serious disturbances owing to the fluctuations of business and the problem of avoiding the ups and downs or the problem of economic development with stability has been engaging the minds of economists since long. All the anti-cyclical monetary and fiscal measures have come into existence because of the desire for stability within the general framework of the capitalist order.

The point to examine is whether fluctuations are inherent within the process of growth. Empirically historical evidence suggests that growth comes about in response to the felt need of a community. The need takes the form of a certain imbalance or disequilibrium in a given situation caused by certain historical changes in the set up and in order to correct the imbalance a fresh wave of economic activity comes into existence. The need is satisfied temporarily and a certain passing equilibrium comes into existence. This is only a short lived equilibrium because no sooner the old needs are satisfied new needs appear in their place resulting in the appearance of a new disequilibrium and hence, again a fresh wave of activity comes into motion. This process of transition from one state of disequilibrium to another.

through some intermediate stages of temporary positions of seeming equilibrium continues *ad infinitum*. Vain, indeed has been the search for stability. Clever historians find that this process of oscillation with the ebb and flow of economic activities is inevitable if humanity is to march towards higher and higher summits of growth. Some theoreticians openly contend that balanced growth is nothing short of a myth because it is totally contrary to all historical experience. On this basis has been drawn the inference that economic growth always takes the form of cyclical fluctuations in output. Lack of fluctuations is equated with a state of stagnation and decay, rather than with a state of stable development.

The line of reasoning appears to be this. Growth has always been preceded by fluctuations and therefore, fluctuations are inherent in the process of growth. Fluctuations are not only inherent in growth but they are responsible for growth. There would be no growth at all without fluctuations! Here is one of the best instances of a vicious circle of reasoning on the basis of a misplaced imputation of an effect to a wrong cause mistaking a shadow for the substance. Fluctuations have not been the cause of growth nor are fluctuations inherent in the process of growth—fluctuations in the cyclical sense of the term. We can cite instances of growth without fluctuations and also of fluctuations without growth. The example of Soviet economic growth is the best instance of development without the usual cyclical fluctuations of a capitalist society. Similarly fluctuations have always been there even in the backward areas of the world without ever producing even the symptoms of growth. Fluctuations have thus been neither the cause, nor the consequence of economic development. They have been just a characteristic feature of the working of the capitalistic order. The end of capitalism would also mean the end of cyclical fluctuations as we understand the phenomenon today. What should rightly be attributed to the capitalistic order has been wrongly attributed to the process of growth.

Discoveries and inventions, the development of scientific knowledge, the application of knowledge to economic ends, the evolution of basic propensities conducive to economic growth, the overthrow of ideals opposed to economic development, economic ambitions propelled by military and political goals, the instinctive love of comfort, luxury and glorious living, rolling in prosperity etc., which have been at the root of economic development, can by no stretch of imagination be attributed to fluctuations. Nor have the anti-cyclical, monetary and fiscal measures widely undertaken in countries like Britain have cried a halt to further development. If anything, growth can get ahead much better without fluctuations.

This does not mean that trade cycle is only a matter of the past. Production under the rules of unbridled capitalism must necessarily lead to the usual economic fluctuations because of the retention of the causes which are held responsible for the ups and

downs Under-consumption, over saving, speculation, accumulation of inventories in order to take advantage of a possible rise in prices, irrational projection of current economic trends into an uncertain future the unreckonable ebb and flow of the waves of optimism and pessimism the erratic behaviour of the stock exchanges etc are bound to continue when production is carried on in an unco-ordinated fashion by a huge number of individuals and when income develops a natural tendency to get concentrated heavily in the hand of a small minority It is only when an agency like the state employs counter-cyclical budgetary and monetary measures that there is some possibility of a reduction in the amplitude of the fluctuations Even a limited state interference however is strictly speaking against the rules of the game Even with an all-vigilant state set against fluctuations one could not assert with confidence that trade cycles would be only a matter of the past Even with an integrated fiscal and monetary policy the state might not succeed in completely eradicating trade cycles because in a predominantly capitalistic order, the proportion of the economic activities which the state could influence by its own policy might not be really very significant So long as the lure of profits continues economic activity is bound to boom despite the rules and regulations of the state It is of course, well recognised that taxation, public expenditure, government grants and subsidies, public debts, bank rate policy of the central bank, credit control, open market operations etc can exercise a good deal of influence in directing the activities in the private sector of the economy This is all the same no guarantee that the state would succeed in completely eliminating trade cycles so as to justify the statement that 'trade cycle is now a matter of the past'

We may draw certain lessons from trade cycle theories for understanding the problems of growth of the backward areas but basically the two problems appear to be radically different In spite of a good deal of scratching of the brains economic theoreticians have not been in a position so far to evolve a universally acceptable theory of growth The 'Wealth of Nations', the 'Net National Product', the 'National Dividend', the 'National Income', as explained by Smith, Marshall, Pigou and Fisher could be taken to be older theories of growth During the last twenty years, there has been a plethora of literature on economic growth The days of Schumpeter, Weber and Marx are all gone We now have in the field, among many others, Lewis, Kuznets, Rostow, Colin Clark etc, but none of them has been able to evolve a rounded theory of development There is however a good hope that out of the fermentation of thought brewing at present something concrete might emerge If one hopes to understand the problems of growth merely by understanding the problems of fluctuations, one is very likely to be rudely disillusioned The problem of fluctuations appears to be just a minor fry in comparison with the bigger problem of economic development

POINTS TO REMEMBER

- 1 *History of capitalism reveals that growth has come about despite recurrent economic fluctuations*
- 2 *Growth and fluctuations—what is the cause and what is the consequence? Is there any relationship between the two?*
- 3 *What are the conditions for growth? Can we attribute the fulfilment of these conditions to economic fluctuations?*
- 4 *The fallacy of before this, and hence, because of this*
- 5 *Integrated fiscal and monetary policy to avoid trade cycles—'trade cycles' could not be a matter of the past*
- 6 *Factors that influence growth—different theories*

Q 22 Explain the relationship between the general level of wages and the rate of economic progress, both in advanced and under-developed economies (Gauhati 1960)

Ans The rate of progress of a given economy obviously depends on the extent to which progress promoting factors find fulfilment and obstacles to growth are broken. During a period of rapid economic progress income raising factors exercise a massive influence over the income depressing factors in such a way that in successive periods of growth the productive capacity of a given economy goes on increasing in a cumulative process. The most distinctive hallmark of progress is the improvement in the productive capacity of a community which enables more and better of production at less and less of cost as a given economy moves onward on the path of progress. Improvement in productive capacity which one could take to be the most reliable indicator of progress could be brought about on the basis of better techniques of production, discovery of new resources, improving efficiency of labour, accumulation of capital, discovery of new markets, an improvement in the terms of trade, a progress oriented change in the governmental administration etc. It is awfully difficult to attribute economic progress to any one particular factor as such especially so, because of the historical experience that economic progress in different advanced areas of the world has been brought about due to a variety of antecedent circumstances.

Presently our task is to isolate the relationship between the general level of wages and the rate of economic progress both in advanced and under developed economies. We have defined the rate of economic progress to mean the rate of improvement in the productive capacity of the community. Therefore we have to examine the relationship between the general level of wages and the improvement in the productive capacity of the economic system in (a) an advanced economy and (b) a backward economy. Further, this relationship between wages and economic development could best be

examined by sifting the connection between the several factors which promote development and the general level of wages. We have also to appreciate how certain changes in the general level of wages would help towards breaking the obstacles to growth. Our examination of the problem would obviously proceed on the assumption that the economic mechanism in question is to operate in accordance with the rule of a free society.

In an advanced economy progress implies not so much a distinct improvement in the productive capacity which by definition has already reached a high level as the full utilisation of the capacity, already brought into existence. May it be noted that this does not admiralate that a further improvement in productive capacity is no progress for an economy, already developed. All that it implies is that the advanced economies are more concerned with the problem of stabilisation of employment and production rather than with the task of raising productive capacity from the 'boot straps' as is the case with the backward economies. We therefore have to examine the relationship between the general level of wages and the problem of stabilisation of the working of the advanced economies at a high level of productivity. Incidentally a reference could also be made to the question of further improvement in the productive capacity of an advanced economy. The Keynesian school of thought has done a thorough job in thrashing this problem in all its details and we could do no better than picking up the principal strands of reasoning, advanced by Keynes, in order to understand the relationship between the general level of wages and economic progress.

For an advanced economy progress mainly implies stabilisation and stabilisation depends on the continued unfailing maintenance of aggregate demand for commodities as well as for factors of production at a level of full employment of the resources available at any particular point of time. Maintenance of aggregate demand at a high level is the key to progress so far as the advanced economies are concerned. We have therefore to examine the relationship between the general level of wages and the maintenance of aggregate demand at a high level. The role of wages could be examined from two angles—(a) from the view point of the employers who regard wages as a significant item of cost and (b) from the view point of the workers who regard wages as the sole source of their income. It is the job of the economic analyst to appreciate both the view points and co-ordinate the two from the angle of the working of the economy as a whole.

In the capitalist societies high wages have always been regarded a hindrance to progress because of the eternal conflict between capital and labour and because of the mistaken belief of the capitalists that the lower the wages the greater the profits. The capitalists have looked upon wages as no more than irksome costs to be suffered on the score of inevitability. It is not only the capitalists but even some

of the top ranking economists like Pigou who held that unemployment could be explained, by and large in terms of wage rigidity. Given a certain amount of wage flexibility they thought, full employment would automatically be ensured and the economy would function smoothly without any hindrance. This snuff belief of the pre Keynesian era was totally blown up on the publication of the *General Theory* in the year 1936. Wages constitute not merely cost to the employers but they are the main source of demand for production. There is a depression of demand if wages be low because it is the wage earners who have a high propensity to consume. It is now widely accepted that great inequalities of wealth and income, accompanied by the low propensity to consume of the rich is mostly responsible for the chronic deficiency of demand and hence the instability of the capitalistic order. The remedy for instability is to prevent a fall in demand which in turn could be ensured best by upgrading wages and stimulating consumption. Over swing or under consumption theories of trade cycles hold that sagging demand could be buttressed only by stimulating consumption and investment in such a way that the total expenditure of the community would be enough to absorb all that has been produced. Harrod has pointed out the dangers of over investment which more or less permanently raise the productive capacity and impose the necessity of a corresponding order of repetitive expenditure if durable investments are to be continuously utilised. The danger of under utilisation of capacity is inherent in all advanced economies unless wages are kept at a high level so as to ensure unfailing demand. Progress in the advanced economies could be ensured by a better distribution of income which in turn could best be done by reducing the size of profits, rent and interest in relation to wages. The advanced economies are not likely to be faced with the problem of a shrinkage in the investible funds of the community due to a rise in wages. There is such a surfeit of capital in the advanced economies that the economic technicians think in terms of accelerated depreciation in order to keep the doors open for further investment. The problem in the backward economies is exactly the opposite.

In the under developed areas of the world the principal obstacle to growth has been the chronic shortage of an investible surplus accompanied by a technological backwardness, low efficiency of labour, the predominance of primitive primary occupations resulting in a constant under utilisation of the known resources let alone the fact that the resources of these areas need to be further explored. The relationship between the general level of wages and economic progress is more difficult to examine in the context of an under developed situation than in the case of the advanced economies. There are quite a few conflicting strands of thought. It is argued that wages in the initial stages of growth of a backward economy must be kept low in order to release as large a size of the national income as possible to form the investible surplus which is pointed out to be the condition for growth. A good deal of historical evidence

from the early stages of growth of the currently advanced economies is proffered in support of the thesis that high wages in the early stages would be incompatible with the requirements of a growing economy. High wages would reduce the size of the investible surplus and thus would hamper the rate of growth of the economy. It is also pointed out that labour in the pre-industrial situation is by and large inefficient and hence wages must also be low because of the low productivity of labour. In the over populated under developed countries of the world the supply of labour especially unskilled labour is so much in excess of demand that the general level of wages is ridiculously low.

It is often said that there is no incentive for investment in a backward economy because of the general lack of demand. The general lack of demand is partly due to the low level of wages. Labour is of a poor quality primarily due to the low levels of living of the workers necessitated by low wages. Marginal productivity of the workers is low because of not only the inefficiency of labour but also because of technological backwardness and inefficiency of management.

There is to be gained by way of added investible surplus by cutting down wages. It would further reduce the efficiency of labour. Much could be gained by cutting the superfluous consumption of the rich to add to the investible surplus. In a backward situation there is a much greater shortage of the human capital rather than the physical capital. We can never hope to build up the necessary human capital unless we ensure at least a living wage. As it is the general level of wages is much too low to permit workers to build up their health and skills which is the very foundation of progress.

POINTS TO REMEMBER

- 1 *Definition of progress—improvement in productive capacity*
- 2 *Factors that promote and those that hamper economic progress*
- 3 *In an advanced economy the conception of progress implies more a matter of stimulating economic activity and not so much a basic improvement in the productive capacity*
- 4 *In a backward economy, growth has to start from the "grass roots"*
- 5 *In a developed economy 'wages' would be the main source of demand. Fallacious conclusions could be drawn by looking upon wages merely as "costs"*
- 6 *There are good many gaps in a situation of under development, the most important of which is human capital. Wages are closely concerned with the construction of human capital*

Q. 23 Examine the view that integration of monetary and fiscal policies is essential for a policy of development with stability
(Gujarat 1959)

Formulate a monetary policy for an under developed country aiming at planned economic development. (W B C S. 1958)

Ans Development with stability is really an excellent goal to aspire for, since there is certainly no point in living constantly under the threat of instability, having once attained to a high stage of development. The depression of 1929 has left indelible scars on the minds of the economists, politicians and the business people alike especially of the industrialised countries of the West. Even today, we find that the U.S.A. is ceaselessly obsessed with the fear of a possible recession in business, resulting in all the usual horrors of shrinking profits, increasing unemployment, falling incomes, dwindling demand which push the economy down the steep slope of a depression. How to preserve the basic frame-work of the capitalistic order and yet, ensure a smooth and stable period of prosperity has been a challenging question to the economic theoreticians and votaries of democracy ever since the days of the historic depression. The socialists argue that instability is inherent in the capitalistic economics because of the lack of over-all co-ordination, great inequalities in the distribution of wealth and incomes which must necessarily lead to a shrinkage of aggregate demand owing to the low purchasing power of the vast majority of the poor classes, the necessity for the rich to save a considerable proportion of their incomes because of their attaining to the point of satiation so far as consumption is concerned and hence, a high propensity to save etc. Moreover, a certain amount of instability is inherent in producing for an uncertain market, in anticipation of a future demand. The socialists believe that there is no escape from instability, short of a total over-all planning which brings about a co-ordination of the activities of numerous individuals in the interests of the society as a whole.

The Keynesian school of thought has brought forward certain novel proposals which strike a compromise between absolute *laissez faire* on the one hand and total over-all planning under a totalitarian regime on the other. These proposals are embodied in their monetary and fiscal plans to regulate the working of the economic mechanism without the fear of the pit falls arising out of the business cycles. These proposals usually go by the name of contra-cyclical budgetary and monetary policy.

Taxation, public expenditure, administration of governmental loans, public works, governmental grants and subsidies etc. form a part of the fiscal policy of the state. Monetary policy covers the regulation of the structure of interest rates, credit control, open market policy, determination of the quantity of currency and coins in circulation etc. Monetary policy and fiscal policy are in reality speaking not two totally independent schemes which work on their

buying of shares etc are some of the anti depression monetary measures. In the face of sagging prices and dwindling profits, these measures might not suffice to fill the entrepreneurs with a robust sense of optimism to inspire them to intensify economic activity so as to combat the onslaught of a depression.

Monetary and fiscal policies which might prove ineffective taken independently, have to be integrated into a coherent single scheme so as to ensure development with stability. It is obvious that a multi frontal intensive attack should be much more powerful in its operations than a unilateral fiscal or monetary policy. Moreover, there is a certain amount of complementarity between the two sets of measures and hence, both have to be taken together. The state can give a general direction to the course of the economy by its own fiscal and monetary policy, especially so, in the advanced economies.

The fiscal and monetary measures envisaged for an advanced economy during a state of depression have to be duly intensified in the case of an under developed economy aiming at a planned programme of development. The advanced economies are bothered about

having attained to a high stage of growth. The backward economies have to deliberately design a clean break with a state of stable equilibrium at a low level of production and consumption. The process of development deliberately disequilibrates the economy in order to build up additional productive capacity. A planned programme of development necessarily implies an ever increasing expansion in the sphere of the state and hence, a corresponding increase in the fiscal and monetary activities of the state.

Where planning is partial as in the case of India, the fiscal and monetary policies have to be so framed as to encourage large scale investment especially in the strategic sectors of the economy. Taxation must not discourage investment, must curb unnecessary consumption, must discourage functionless imports, must regulate the pattern of investment. Monetary policy should also seek to achieve the goal of increasing investment into desirable channels.

There has to be an integration of fiscal and monetary policy with the aims and objects of a planned programme of development.

POINTS TO REMEMBER

- 1 *The inherent instability of the capitalistic order—recurrent periodical crises—the threat of a depression always round the corner*
- 2 *The Keynesian diagnosis of the malady*
- 3 *The components of a fiscal policy—taxation, public expenditure, public loan, etc*
- 4 *The constituents of a monetary policy—bank rate policy, open market operations, liquidity ratio of the banks, policy of the central bank towards money etc*

5 Contra cyclical fiscal and monetary policy
 6 The role of money in promoting planned basis

Q 24 Show how and to what extent money is used to promote economic development

Discuss the relation of money to economic

Gujarat 1958)

Ans To what extent monetary policy could be bent to subserve the ends of economic growth is a question of great theoretical importance and immense practical significance especially to the under developed areas of the world. During the last twenty years no single topic has engaged the minds of eminent economists all over the world as the problem of economic development of the backward countries covering between themselves about two thirds of the human race. The problems confronting the under developed areas of the world are so grave that all ways and means must be explored in the direction of promoting a rapid economic growth in order to emancipate billions of members of the human society from the strangulating hold of extremely low levels of income.

The advanced countries of the world have found by experience that monetary policy could be employed to liberate their economies from the cyclical ups and downs. Economists like Keynes, Hansen and Lerner have convincingly argued that there is a possibility of stabilising the working of the capitalistic order just by manipulating monetary and fiscal policy without seriously interfering with the rules of a free society. They have prescribed preventive and curative monetary measures to avert violent fluctuations in the advanced economies. Their diagnosis as well as prescription is obviously based on the experience of the industrially advanced countries. Perhaps, by analogy, the question has now come up as to whether monetary policy could also be manipulated to promote the economic growth of the backward areas.

There are economies and economies which could be called under developed and it is rather difficult to examine the relationship between monetary policy and economic development in a general way, covering backward countries with different degrees of under development, due to a variety of distinct economic and social antecedents of their own. What immediately matters however for our purposes is the extent of monetisation in a given economy. Monetary measures could be expected to evoke the intended responses to the extent that the backward economies have been monetised. Money could play a significant role to the extent that production, distribution, consumption, saving and investment are guided and governed by the

influence of money. This is by far the most important condition for the successful manipulation of monetary policy.

The under developed economies are characterised by the existence of a predominant primary sector comprising the extractive industries like agriculture, forestry and fisheries which are hardly monetised. Subsistence farmers who are numerically the largest produce primarily for the consumption of their own families and the village artisans engage themselves in some economic activity mainly for barter. The wants of the vast majority of the rural folks are awfully meagre and hence the need for exchange especially, in terms of money arises only for a few basic commodities like salt and kerosene. It is found, for instance, that in a typical Indian village exchange in terms of money is confined to about only 30% of the requirements of the villagers, the rest being satisfied by the farmers on their own. The point to notice is that the scope for monetary manipulation in order to promote economic development gets severely restricted in the context of a typical under development situation in which money plays only a minor role. The application of monetary policy postulates a highly monetised economic system like the ones that we find in the industrialised economies of the world in which production assumes the usual form of $M \rightarrow C \rightarrow M'$ —investment of money by the entrepreneurs (M) in order to make more of money (M') by producing commodities in anticipation of a future demand.

It is doubtful whether manoeuvring of monetary policy could be of much avail in the non monetised subsistence sectors of the under developed economies. Commercialisation and monetisation are the basic preconditions for money to play the normal role which it usually plays in the advanced countries. The malady with the backward economies is far more serious and deep rooted than with the advanced economies which periodically experience the ups and downs of business. Having built up a high level of productive capacity the advanced economies run into occasional difficulties due to the anarchy of planning and the rashness of the expectations of the entrepreneurs. The monetary mechanism can be manipulated to pull an advanced economy out of the morass of business cycles because the basic requirements of production are already there and what is lacking is a lack of co ordination. In a backward economy there is a scarcity of capital technical knowledge and organisation, dearth of helpful attitudes and a shortage of almost every thing except perhaps, unskilled labour and unexploited resources. Over head facilities are awfully scarce and this acts as a disincentive for any sort of enterprise.

It is not easy to fill the basic gap in a situation of under development merely by pulling the monetary wires. Should a people be devoid of entrepreneurial ability how are we going to remedy the situation by devising an appropriate monetary policy? If the institutions of a given community are antagonistic to the spirit of

progress, how are we going to change the institutions and change the attitudes of the people by designing a suitable monetary policy? In the over populated under developed areas, if marriage be universal because of religious injunction and if people have a basic faith in uncontrolled reproduction how are we to change their faith by a monetary policy? If there be an acute shortage of real capital, how are we to bring that capital into existence, by manipulating monetary policy? If the parents refuse to send their children to school because of their own fool hardy ignorance, how are we to change their attitudes by a suitable monetary policy? It seems monetary policy must end in a fiasco in the non monetised economies of the world, if one hopes to promote the economic development of such an area merely by devising an appropriate monetary policy.

Pessimism however, would gradually fade into optimism with increasing monetisation and with increasing significance of production for exchange rather than production for personal consumption. The monetised sector of even a backward economy can be greatly regulated in the interest of economic development by devising a suitable monetary policy. A lowering of the bank rate for instance is likely to make money cheap and other things being equal this might bring about an improvement in the marginal efficiency of capital providing an incentive for more of investment. The open market operations of the central bank of a backward country could also be so manipulated as to make the money market easy. If this leads to a misdirection of investment the central bank could apply selective credit controls so as to direct investment into desirable channels. In fact credit policy of the banks plays a decisive role in the economic development of a country and banking policy is largely subject to the over all supervision of the central bank of a country. The attitude of the central bank towards credit control is a part of the monetary policy of the state. The central bank could certainly exercise a certain amount of control over the private industrial and commercial banks in the interest of economic development. Finally the quantity of money in circulation is eventually determined by the monetary policy of the State and this has a profound influence on the economic development of a country.

Monetary policy as generally understood in the industrialised countries of the West cannot by itself achieve anything revolutionary in promoting the economic development of a backward country, unless that country possesses a significant monetised sector. Money policy, taken in conjunction with a planned programme of growth can go a long way in breaking the barriers to growth.

POINTS TO REMEMBER

1. Monetary and fiscal policies have been employed in the advanced economies to curb the amplitude of cyclical ups and downs. Can we use monetary policy to promote growth as well?

- 2 The role of money in a typically non-monetised backward area.
3. Production for subsistence is different from production for exchange in terms of money.
- 4 Monetisation is a necessary condition for the useful employment of monetary policy to promote growth
- 5 The contrast in the natures of an advanced and an under-developed situation
- 6 Limitations of monetary policy in an under-developed area.

SOME IMPORTANT QUESTIONS WITH SYNOSES

Q 1 What do you mean by 'full employment'? Discuss how this full employment can be secured (Gauhati 1960)

What do you understand by 'full employment'? How far is it possible to attain it through monetary measures? (Allahabad 1959)

What is full employment? How far is it meaningful concept in regard to an under developed economy? (Bombay 1957)

1. The concept of 'full employment' is often misused and misunderstood. Full employment to be sure, does not refer to a situation where all labourers are fully employed and there is absolutely no unemployed labour. In fact, in every economy and at any time there is bound to be some amount of unemployment caused by "frictions". These frictions may be technological changes, changes in tastes and habits of the consumers, scarcity of equipment and raw materials in particular lines of production etc. The unemployment caused by these factors is described as 'frictional unemployment'. The frictional unemployment is not a serious problem as by their very nature the "frictions" are temporary and given sufficient time the frictional unemployment would disappear. Strictly speaking frictional unemployment is not regarded as unemployment at all. Thus full employment is compatible with a certain amount of frictional unemployment.

2. By the term 'full employment' Keynes implies the absence of 'involuntary unemployment'. 'Men are involuntarily unemployed if in the event of a small rise in the price of wage goods relatively to the money wage both the aggregate supply of labour willing to work for the current money wage and the aggregate demand for it at that wage would be greater than the existing volume of employment' (Keynes, *General Theory* p 15). In other words in a state of involuntary unemployment, labourers being under a "money-illusion" are prepared to accept a cut in real wages although they may resist a cut in money wages so that aggregate employment would increase. A situation of full employment, on the other hand refers to one where every fall in real wages leads to an exactly proportionate increase in money wages so that employment does not increase. As Keynes has put it full employment is a situation "in which

aggregate employment is inelastic in response to an increase in the effective demand for its output."

- 3 The Keynesian concept of industry is inappropriate in the context of the underdeveloped economy. In the Keynesian sense the underdeveloped economy is in full employment equilibrium. For the phenomenon of involuntary unemployment which is characteristic of the advanced industrial sector is of little significance in a predominantly agrarian underdeveloped economy. The type of unemployment which is peculiar to the underdeveloped economy is the disguised unemployment widespread in the agricultural sector. Disguised unemployment refers to the surplus labour whose marginal productivity is nil so that by utilising this for some other purpose the total output can be increased. In the context of the underdeveloped economy full employment must be defined as a state where disguised unemployment is absent. In this sense, full employment means a situation where any further employment of labour would bring down the marginal productivity of labour.
- 4 Employment can be increased by the use of monetary policy to some extent. A cheap money policy increases the profitability of investment. If investment increases output and employment would also increase. But Keynes and Hansen are doubtful if full employment can be attained through monetary measures alone. The monetary authority can influence the rate of interest only but it cannot influence the marginal efficiency of capital which is a psychological factor and is a more important determinant of investment.
- 5 Keynes and his followers like Hansen, Kurihara and Lerner have suggested a dynamic fiscal policy for the attainment of full employment. In the first place the tax rates should be reduced for the poorer sections and increased for the richer sections. A more equitable distribution of income would increase consumption and thereby promote investment and employment. Secondly, the public investment should be stepped up. The public investment may be financed either through the creation of a budget deficit or by printing new money.

Q 2 Examine the possibility of the maintenance of full employment in a free enterprise society by monetary policy alone
(Delhi 1960)

Critically examine whether a sound monetary policy alone can bring about economic stabilization
(Rajasthan 1959)

- 1 In a mature industrial economy which has already attained a high level of income and full employment, the fundamental

tal economic problem is to maintain stability. Is it possible to maintain the stability of income and employment by monetary policy alone? On the basis of the theory underlying monetary policy and from the point of view of the practical experience of the capitalist economies with the instruments of monetary control during the last three or four decades the answer would appear to be in the negative. Unless monetary policy is supplemented by fiscal policy, it would be too weak to ensure stability in a free enterprise economy.

- 2 Monetary policy seeks to influence the levels of income and employment via changes in the aggregate consumption expenditure and aggregate investment expenditure through changes in the volume of credit in the economy. The volume of credit is only one of the many factors influencing the level of economic activity, not the sole factors determining it. The credit has only an indirect influence upon the levels of income and employment. For instance in times of boom or inflation the central bank may raise the bank rate with a view to bring down the price level. But if the businessmen are optimistic about the future prospects, a mere rise in the bank rate would be too weak to put a check upon the rising level of investment. Similarly, in times of depression or deflation when the businessmen become pessimistic about the future prospects they cannot be induced to raise the level of investment by a mere lowering of the bank rate. Likewise the success of the policy of open market operations depends upon the desired reaction of the public and the banking system to the central banking policy. In times of boom or inflation the central bank is supposed to reduce the volume of credit by selling out securities in the open market. The policy would bear fruit only if the commercial banks and the public are prepared to purchase securities and part with the liquid cash. Similarly in times of depression or deflation the open market policy would be successful only if the banks and the public are willing to sell out securities to the central bank. Thus from the theoretical point of view the weapons of monetary policy have only an indirect influence on the levels of income and employment.
- 3 The theoretical doubts about the efficacy of monetary policy are confirmed by the practical experience of the thirties. During the depression of the thirties the central banks carried the process of credit expansion to fantastic extremes but without any noticeable impact on the level of economic activity. This made it abundantly clear that economic stability cannot be maintained by mere monetary manipulation.

- 4 The tools of fiscal policy are much more direct in their effect upon the levels of income and employment. policy does not have to depend upon the psychological reaction of the banking system or the public for its successful operation. In times of deflation or depression, the method of deficit spending or public investment directly raises the level of aggregate investment in the system which has a multiplier effect upon income and employment. Similarly in times of boom the creation of a budget surplus directly reduces the level of aggregate investment. The volume of consumption expenditure can also more easily be regulated by fiscal policy. In times of inflation, the aggregate spending can be directly reduced by raising the tax rates and the reverse can be done to increase the aggregate spending in times of deflation.
- 5 In most of the free enterprise economies monetary policy has been relegated to the background. It is used as an instrument of stabilization in conjunction with fiscal policy.

* * * *

Q 3 "The possibility of underemployment equilibrium is largely a matter of assumptions regarding shapes of the strategic functions. Elucidate" (Venkateswara 1960)

To what extent is the Keynesian theory of underemployment equilibrium consistent with the classical theory of full employment equilibrium? (Allahabad 1960)

'Inherent in the free functioning of a capitalist system are forces leading it to a permanent low level of underemployment equilibrium' Discuss (Karnatak 1959)

Why can a classical economist not admit that equilibrium can exist without full employment? How does Keynes prove the theory of under employment equilibrium? (Mysore 1956)

- 1 According to the classical economists unemployment is incompatible with competitive equilibrium. This assertion is based upon Say's Law of Markets which states that every supply creates its own demand and therefore a general overproduction or a chronic mass unemployment is impossible. Under conditions of free competition if at any time the supply of a commodity is greater than its demand its price will automatically fall until supply is equal to demand. Labour is also like a commodity. If the supply of labour is at any time greater than its demand there would be unemployment. But under perfect competition the unemployed labourers will compete for jobs and their competition would lower the wage rate to the level at

which supply of labour would again be equal to demand and unemployment would be wiped out. In the same way if the savings are at any time greater than investment the market rate of interest would fall until monetary equilibrium is restored.

- According to Keynes the classical theory is an oversimplification of reality. Keynes contends that full employment far from being a normal feature of the capitalist economy is an exceptional case. On account of certain technical and institutional factors inherent in the capitalist structure of society chronic underemployment equilibrium is the normal situation. A state of full employment is merely a deviation from the underemployment equilibrium.
- Keynes contends that unemployment is not due to wage rigidity as the classical economists assert but due to the deficiency of effective demand and hence the situation of unemployment is not corrected by a mere fall in the wage rate. Similarly the saving and investment functions are not perfectly responsive to changes in the rate of interest as the classical economists assume.
- According to Keynes chronic underemployment equilibrium arises on account of the peculiar shapes of the investment function, consumption function and the liquidity function. The liquidity function is highly interest elastic—the demand for money for speculative motive is highly responsive to changes in the rate of interest. At a low rate of interest the demand for money becomes perfectly elastic. This means that the rate of interest does not fall and cannot be reduced below a certain minimum. The classical economists on the other hand assume that demand for money is only income elastic and interest elastic.

Secondly the classical economists assumed an interest-elastic savings or consumption function. But Keynes assumes an income elastic consumption function. He contends that the marginal propensity to consume is less than unity and as the level of aggregate national income rises, the marginal propensity to save increases and the aggregate savings tend to exceed aggregate investment.

According to the classical economists, the level of investment depends solely upon the rate of interest. But Keynes introduces an additional factor in his investment function namely, the marginal efficiency of capital which he regards as a more important determinant of investment than the rate of interest. The marginal efficiency of capital is highly psychological factor so that a mere rise or fall in the rate of interest does not always affect the investment.

existence of involuntary unemployment excess capacity in the capital equipment and the elastic nature of industrial production) an increase in investment leads to an increase in real income without delay. In an underdeveloped economy on the other hand on account of the inelasticity of the supply of output, an increase in money investment merely spends itself in generating inflationary pressure.

Q 5 Explain the concepts of the multiplier and the income velocity of money and carefully bring out the distinctions between the two (Poona 1960)

Critically examine the theory of multiplier as an instrument of dynamic analysis of economic changes (Gujarat 1960)

1. The concept of *income velocity of money* was introduced by Keynes in his *Tract on Monetary Reform*. The income velocity of money is defined as the ratio between the national income and the aggregate money supply. If Y be the real national income and M the aggregate money supply, the income velocity of money $k = Y/M$. The income velocity measures the average number of times a unit of money is received as income by the final income recipients during the period under consideration. The income velocity of money is of greater relevance than the Fisherian velocity of circulation of money in the determination of the price-level. For the effect of a change in the quantity of money upon the price level does not depend merely on the quantity of money but on the supply of money relatively to the aggregate real income. If an increase in the quantity of money is accompanied by a corresponding increase in the real income the price level will not be affected substantially.
2. The concept of *multiplier* was originally introduced by Prof Kahn. He referred to employment multiplier which implies that the increase in total employment as a result of an increment of investment is a multiple of the primary increase in employment. Keynes' income multiplier implies that the increase in aggregate income is a multiple of the original increment of investment. If ΔY be the increase in aggregate income, ΔI the increment of investment, then multiplier,

$$k = \frac{\Delta Y}{\Delta I}$$

The value of k depends upon the marginal propensity to consume. Higher the marginal propensity to consume,

of recovery. The recovery from the bottom of depression is slow and gradual because as Prof Pigou has pointed out when the businessmen become pessimistic they can be persuaded to revise their outlook about future and to increase the level of investment only slowly and gradually. But this is a non monetary factor.

7 Regarding the third characteristic feature of trade cycle namely periodicity Hawtrey contends that periodicity is not an integral part of the trade cycle. The observed periodicity of the trade cycle was due to the International Gold Standard. Under the Gold Standard the processes of expansion and contraction took almost the same time to work themselves out. After the breakdown of the International Gold Standard the marked periodicity of cyclical fluctuations has disappeared.

The purely monetary theory stands as a discredited explanation of the phenomenon of trade cycle. It is felt by the authorities on business cycles like Hansen, Hicks, Kalecki and Istev that it completely neglects certain technical and psychological factors which play an equally important role if not a more important role than the monetary factors.

Q 7 Explain carefully what Keynes meant by the statement that the trade cycle is mainly due to the way in which marginal efficiency of capital fluctuates
(Nagpur 1959)

1 According to Keynes by far the most significant determinant of the levels of income and employment in a capitalist society is the marginal efficiency of capital. The marginal efficiency of capital is the rate of discount which would make the present value of the series of annuities given by the returns expected from the capital asset during its life just equal to its supply price. In plain language, it refers to the expected rate of profit over the life time of the capital asset.

Indeed the levels of income and employment depend upon the three independent functions of the Keynesian system namely consumption function, liquidity function and investment function. The consumption function is relatively stable as the tastes and habits of a population are not subject to frequent fluctuations. The rate of interest does fluctuate to a greater extent but its effects are not so significant. The investment function is dependent upon two variables namely the rate of interest and the marginal efficiency of capital of which latter is more important. (See Keynes' *General Theory*, Ch 11, Sec V)

2 It logically follows that since the propensity to consume and the rate of interest are relatively stable factors the explanation of the fluctuations in the levels of income, output and employment associated with the phenomenon of trade cycle has to be sought in the state of the marginal efficiency of capital 'The schedule of the marginal efficiency of capital is of fundamental importance because it is mainly through this factor (much more than through the rate of interest) that the expectation of the future influences the present'

3 According to Keynes the boom is brought about by a rise in the marginal efficiency of capital which may be due to an internal factor like invention or an external factor like the opening up of the new channels of foreign trade. The boom is brought to an end by the rising prices as full employment approaches. The rising prices raise the cost of production and the marginal efficiency of capital falls.

4 The depression is brought about by a fall in the marginal efficiency of capital. The depression also cannot continue indefinitely for two reasons. First, in prosperous periods the businessmen pile up heavy stocks of raw materials and during depression the liquidation of these stocks is an important cause of disinvestment. When these stocks are exhausted disinvestment stops. Secondly, there is the flow of autonomous investment.

5 Keynes also explains the periodicity of the trade cycle. The period of boom is determined by bottlenecks shortage of labour and capital. The length of the depression depends upon the time necessary for the wearing out and obsolescence of the durable capital equipment.

Q 8 Examine the role of the acceleration principle in explaining economic fluctuations (Gauhati 1960)

1 The acceleration principle is a concept of recent origin which suggests a technical relationship between consumption and investment. The principle of acceleration states that the changes in investment are a function not of the absolute level of consumption but of the rate of growth of consumption so that a slight change in the demand for consumption goods produces a much more violent change in the demand for capital goods. The size of the acceleration effect depends upon the capital output ratio and the durability of the capital equipment.

2 Prof J R Hicks has advanced an explanation of the phenomenon of trade cycle exclusively in terms of the

acceleration principle in his recent book *A Contribution to the Theory of Trade Cycle*. Thus he seeks to establish the fundamental thesis that trade cycle is essentially a non-monetary phenomenon.

- 3 The boom is started by an initial spurt of investment say due to an invention. The rise of investment above the normal level sets up the acceleration and multiplier effects so that the economy moves upward. But this upward movement cannot continue indefinitely on account of the 'full employment ceiling'. As the economy hits the full employment ceiling the path of output turns downwards and the downswing begins.
- 4 The downward movement also cannot continue indefinitely on account of the transformation of the acceleration. The acceleration principle does not work in the downswing in the same way as in the upswing. In the upswing there is no limit to the acceleration effect but in the downswing there is a definite limit to the magnitude of the acceleration effect. The volume of disinvestment cannot exceed the depreciation. Thus the downswing has a bottom. The economy creeps along this bottom for sometime depending upon the excess capacity. Once the excess capacity is exhausted positive acceleration effect becomes operative again and the cycle can be repeated.
- 5 Thus Hicks provides a satisfactory explanation of the turning points of the trade cycle in terms of the acceleration principle. He also provides an explanation of the periodicity of the cyclical fluctuations. Since the system has a ceiling and a floor output changes will oscillate between these two limits and the very existence of these limits ensures some sort of periodicity.

Q 9 Explain what you would consider to be the essential requirements of an adequate business cycle theory. What do you think of the view that every business cycle is a new historical incident
(Delhi 1958)

Explanation of the trade cycle will remain controversial because there will always be difference in the relative emphasis placed on the relevant technical and institutional factors. Discuss
(Delhi 1956)

- 1 A complete and adequate theory of business cycle must be capable of explaining fully the characteristic features of the cyclical fluctuations. In the first place, it must explain why the processes of expansion and contraction are cumulative in character. Secondly, it must account for the alternations in the processes that is why the boom gives